

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NORTH CAROLINA
EASTERN DIVISION

NO. 4:18-CV-97-D

SOUND RIVERS, INC.,)
CENTER FOR BIOLOGICAL DIVERSITY,)
and CLEAN AIR CAROLINA,)

Plaintiffs,)

v.)

U.S. FISH AND WILDLIFE SERVICE and)
GREG SHEEHAN, in his official capacity as)
ACTING DIRECTOR, U.S. FISH AND)
WILDLIFE SERVICE; NORTH CAROLINA)
DEPARTMENT OF TRANSPORTATION)
and JAMES H. TROGDON III, in his official)
capacity as SECRETARY, NORTH)
CAROLINA DEPARTMENT OF)
TRANSPORTATION; FEDERAL)
HIGHWAY ADMINISTRATION and JOHN)
F. SULLIVAN III, in his official capacity as)
DIVISION ADMINISTRATOR, FEDERAL)
HIGHWAY ADMINISTRATION, NORTH)
CAROLINA DIVISION; NATIONAL)
MARINE FISHERIES SERVICE and)
CHRISTOPHER J. OLIVER, in his official)
capacity as ASSISTANT ADMINISTRATOR)
FOR FISHERIES, NATIONAL MARINE)
FISHERIES SERVICE,)

Defendants.)
_____)

SECOND AMENDED COMPLAINT

[Fed. R. Civ. P. 7; 15]

NATURE OF THE CASE

1. The North Carolina Department of Transportation (“NCDOT”) wants to construct the state’s most expensive highway—a \$2.2 billion toll road—through some of the most sensitive and important wildlife habitat in Piedmont North Carolina. For decades the project has

failed to move forward as federal agencies, including the United States Fish and Wildlife Service (“USFWS”), have raised concerns about the massive amount of destruction the highway will cause, including impacts on imperiled species and the habitat in which they live.

2. In raising these concerns, officials at USFWS were complying with their responsibilities under the Endangered Species Act (“ESA”), which was enacted in 1973 to halt the nation’s march towards mass species extinction. Under the ESA, federal agencies have a duty to examine any federal action that might harm any threatened or endangered species, to ensure that the activity will not put the species at risk of extinction in the wild, and to aid in the species’ recovery.

3. In recent times, however, USFWS has abruptly abandoned its responsibilities under the ESA. This spring the agency published a hurriedly put together document that allows the massive toll highway to bulldoze right through endangered mussel habitat without any measures in place to ensure species survival, let alone assist the species to recover.

4. The official Biological Opinion published by the USFWS allows NCDOT to destroy *every single threatened or endangered mussel* present in over 50 miles of habitat. The document does not attempt to determine how many mussels will in fact be destroyed. The document provides for no monitoring or reporting requirements. The document includes no trigger or safeguard to revisit the analysis.

5. The only even vaguely protective measure in the Biological Opinion is a short-term commitment from NCDOT to provide some minimal funding for an off-site mussel propagation facility. Notably, the funding for this facility will have run out before NCDOT even finishes construction of the toll highway. Moreover, there is no guarantee made in the USFWS approval that the propagation facility will be successful, and no plan whatsoever for

reintroducing any propagated mussels back into the wild. No analysis has been performed to demonstrate that the success of the facility will offset the huge damage that will come from construction of a twenty-seven-mile, six-lane highway and all the associated growth and development it will bring.

6. USFWS has failed in every way to analyze impacts to the endangered mussel species and ensure that measures are in place to prevent extinction, minimize loss, and put the species on the road to recovery. The Biological Opinion is arbitrary and capricious and not in accordance with the law.

7. Similarly, the National Marine Fisheries Service (“NMFS”) was required under the ESA to evaluate the impacts from the highway to endangered Atlantic sturgeon and the sturgeon’s critical habitat within the Neuse River. Much like USFWS’s faulty review, NMFS failed to consider key water quality impacts and indirect impacts to Atlantic sturgeon and its habitat, instead narrowly focusing on construction impacts from building a single crossing of the Neuse River. NMFS’s determination under the ESA is arbitrary and capricious and not in accordance with the law.

8. Subsequent to USFWS’s publication of its Biological Opinion, the Federal Highway Administration (“FHWA”) issued a Record of Decision (“ROD”) finalizing its decision to construct Complete 540 pursuant to the National Environmental Policy Act (“NEPA”).

9. The Draft and Final Environmental Impact Statements for the Complete 540 project were prepared, pursuant to NEPA, by FHWA and NCDOT (collectively “the Transportation Agencies”). The documents failed to analyze and disclose the environmental impacts that will be associated with the project, including direct impacts to air quality, water quality, wildlife and habitat, increases in climate changing emissions, and impacts to

environmental justice communities. In addition, the documents failed to analyze a reasonable range of alternative solutions and used arbitrary methodologies to eliminate alternatives early in the process. Finally, the Transportation Agencies failed to disclose how and where impacts to streams and wetlands will be mitigated, and how the ecological function that will be lost will be restored.

10. Three conservation groups, Sound Rivers, Inc. (“Sound Rivers”), the Center for Biological Diversity (the “Center”) and Clean Air Carolina bring this challenge and ask that the Court vacate USFWS’s Biological Opinion and issue a declaratory judgment that the agency’s analysis was unlawful; vacate NMFS’s Consultation Letter and issue a declaratory judgment that the agency’s analysis was unlawful; vacate FHWA’s Record of Decision and issue a declaratory judgement that the agency’s analysis was unlawful; and enjoin the agencies from taking for further steps to move forward with construction of the Complete 540 toll highway.

JURISDICTION AND VENUE

11. This action arises under the ESA, 16 U.S.C. §§ 1531-44, the National Environmental Policy Act (“NEPA”), 42 U.S.C. §§ 4321-47, and the Administrative Procedure Act (“APA”), 5 U.S.C. §§ 701-06. This Court therefore has jurisdiction over this action pursuant to 28 U.S.C. § 1331 (federal question) and 28 U.S.C. § 1361 (action to compel a federal officer to do his duty), and it may issue a declaratory judgment and grant further relief pursuant to 28 U.S.C. §§ 2201-02. Plaintiffs are entitled to bring this action pursuant to the APA, 5 U.S.C. § 702.

12. Venue is proper in this Court pursuant to 28 U.S.C. § 1391(e) because a substantial part of the events or omissions giving rise to the claim occurred in this judicial district and Plaintiff Sound Rivers resides in this district.

PARTIES AND STANDING

Plaintiffs

13. Plaintiff Sound Rivers is a non-profit organization with its principal office in Washington, Beaufort County, North Carolina, that guards the health of the Neuse and Tar-Pamlico River Basins. Sound Rivers was founded in 2015 with the merger of two of the state's oldest grassroots conservation organizations, the Neuse River Foundation, established in 1980, and the Pamlico-Tar River Foundation, established in 1981. Sound Rivers partners with concerned citizens to monitor, protect, restore, and preserve these watersheds.

14. Sound Rivers' goal is to provide clean water to its communities for consumption, recreation, nature preservation, and agricultural use. Sound Rivers also employs three full-time Riverkeepers® who monitor and protect the Neuse and Tar-Pamlico River Basins, serving as scientific experts and educational resources to schools and communities in the watershed. Sound Rivers is a member of the Waterkeeper Alliance, a nonprofit focused on ensuring drinkable, fishable, and swimmable water everywhere. Sound Rivers has approximately 2,500 members in North Carolina, including numerous members in the Raleigh area.

15. Sound Rivers has members who live and work in the area of Wake and Johnston Counties that will be affected by the Complete 540 toll highway project (the "Project"). Members of Sound Rivers visit, recreate, observe birds and other wildlife, photograph, and otherwise use and enjoy the area. Sound Rivers' members also have educational and scientific interests in the preservation of the area.

16. Sound Rivers' members and staff derive scientific, aesthetic, and spiritual benefit from the existence of the natural features of the area, including Swift Creek and the Neuse River,

and the wildlife species that depend on these waters for habitat, and they value the preservation of the area.

17. In particular, Sound Rivers' members value the presence of Atlantic sturgeon, dwarf wedgemussels, yellow lance mussels, and the fish species on which those mussels rely to propagate. Sound Rivers' members value these species for their own sake and also as integral parts of the riverine ecosystem. Many different kinds of wildlife eat mussels, including raccoons, otters, herons, and egrets. By filtering water for food, mussels help to naturally purify river waters and, by the same token, mussels are good indicators of aquatic health and suitability of habitat for other species.

18. Because mussels' ability to survive and thrive in a river directly indicates the river's water quality, they and similar indicator species are particularly important to Sound Rivers' ongoing work to create the healthiest river possible.

19. Sound Rivers and its members have been actively opposed to the proposed toll highway. Sound Rivers, through its members and staff, including the Upper Neuse Riverkeeper, has voiced opposition to the project at public meetings held by Defendants. Sound Rivers and its members have participated in the NEPA process and submitted comments on the project through counsel.

20. Plaintiff Center for Biological Diversity is a non-profit environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center is headquartered in Tucson, Arizona, and has an office in Asheville, North Carolina. The Center has more than 1.6 million members and online activists including 1,184 members and 17,408 supporters in North Carolina, with numerous members in the Raleigh area.

21. The Center has members who live and work in the area of Wake and Johnston Counties that will be affected by the Complete 540 toll highway project. The Center has members who visit, recreate, observe birds and other wildlife, photograph, and otherwise use and enjoy the area, including Swift Creek. The Center, its staff, and its members derive scientific, aesthetic, and spiritual benefit from the existence of the natural features of the area, including Swift Creek and the Neuse River and the wildlife species that depend on these waters for habitat, and they value the preservation of the area.

22. The Center's members value the presence of Atlantic sturgeon, dwarf wedgemussels, yellow lance mussels, and the fish species on which those mussels rely to propagate. The Center's members value these species for their own sake and also as integral parts of the riverine ecosystem. Many different kinds of wildlife eat mussels, including raccoons, otters, herons, and egrets. By filtering water for food, mussels help to naturally purify river waters and, by the same token, mussels are good indicators of aquatic health and suitability of habitat for other species.

23. The Center's members and staff are keenly focused on ensuring the survival and recovery of all imperiled species. The Center's members and staff have taken a particular interest in protecting dwarf wedgemussel and yellow lance populations as a part of the organization's focus on conservation of freshwater biodiversity in the Southeastern United States.

24. Plaintiff Clean Air Carolina is a not-for-profit corporation founded in 2002. Clean Air Carolina has 120 members in North Carolina. Its mission is to ensure cleaner air quality for all by educating the community about how air quality affects health, advocating for stronger clean air policies, and partnering with other organizations committed to cleaner air and

sustainable practices. Its primary goal is to improve health by achieving the cleanest air possible. Clean Air Carolina aims to improve North Carolina air quality by reshaping the practice of relying almost exclusively on highways for transportation needs and supports a multi-modal system, including more passenger rail, bike and pedestrian options, and consequent development patterns that will lead to less single-occupant auto travel.

25. Clean Air Carolina is based in Charlotte and works on regional and statewide issues. The organization has specific concerns about air quality in the Raleigh region. Clean Air Carolina has members who live in Wake and Johnston Counties who are impacted by poor air quality.

26. Clean Air Carolina monitors and participates in highway and transportation planning in Wake and Johnston Counties and has participated in the administrative processes surrounding the planning of Complete 540 in these affected counties. Clean Air Carolina seeks to inform and educate its members and the public concerning highway and transportation planning and the impacts of transportation decisions on the human environment, and advocates for transportation planning and policies that will have the least long-term impact on the human environment. These organizational interests are directly and irreparably injured by Defendants' violations of law described in this complaint.

27. Clean Air Carolina and its members have been actively opposed to the proposed toll highway. Clean Air Carolina, through its members and staff, has voiced opposition to the project at public meetings held by Defendants. Clean Air Carolina and its members have participated in the NEPA process and submitted comments on the project through counsel.

28. Defendants' Complete 540 highway project will destroy or degrade the important habitat in Swift Creek Watershed and the Neuse River, harm species that depend on the habitat

for survival, disrupt ecological systems, increase greenhouse gas emissions, decrease air and water quality, and disproportionately impact environmental justice communities. The Project will thereby directly, adversely, and irreparably injure Sound Rivers, the Center, Clean Air Carolina, and their members and staff.

29. Plaintiffs believe that, if Complete 540 proceeds as currently planned, it will harm their scientific, aesthetic, recreational, and spiritual interests in the natural area around the proposed toll highway project and their ability to enjoy the area, including Swift Creek and its abundant wildlife. They also believe that communities in the area near Complete 540 will suffer social, economic, and health consequences. They further believe that other Project alternatives would cause fewer negative impacts to their interests.

30. These actual and potential injuries have been and continue to be caused by the illegal decisions and actions of the Defendants regarding the Project. The injuries will not be redressed except by an order from this Court that: (1) vacates the USFWS Biological Opinion and incidental take statement; (2) vacates the NMFS Consultation Letter; (3) vacates the NEPA documents; (4) requires Defendants to comply with the ESA, NEPA and all other applicable laws, regulations, and orders; (5) ensures that Defendants take no further actions toward constructing the Project until they have complied with those laws; and (6) orders the further relief sought in this action.

Defendants

31. Defendant USFWS is a subordinate federal agency within the U.S. Department of the Interior. USFWS prepared the Biological Opinion, attached hereto as Exhibit 1, challenged in this action and was responsible for ensuring that the document complied with the ESA and its implementing regulations.

32. Defendant Greg Sheehan is the Acting Director of USFWS and is sued in that official capacity. Acting Director Sheehan had the final authority over USFWS' preparation and approval of the inadequate Biological Opinion challenged in this action.

33. Defendant NCDOT is an agency of the state of North Carolina. NCDOT prepared the Environmental Impact Statements ("EIS") and ROD challenged in this action, and is relying on these NEPA documents, as well as USFWS's Biological Opinion and NMFS's Consultation Letter, to pursue construction of Complete 540.

34. Defendant James H. Trogdon III is the Secretary of NCDOT. He is sued in his official capacity.

35. Defendant FHWA is a subordinate federal agency within the U.S. Department of Transportation. FHWA was responsible for overseeing the completion of the EIS and ROD and for ensuring that these documents complied with federal law. FHWA is the federal agency that took most of the final agency actions challenged herein by issuing or adopting the inadequate NEPA documents that are challenged in this action. FHWA issued or adopted these documents through its North Carolina Division office in Raleigh, North Carolina.

36. Defendant John F. Sullivan III is the North Carolina Division Administrator for FHWA, and is sued in his official capacity as the head of FHWA's North Carolina Division Office. Administrator Sullivan had the ultimate responsibility for FHWA's approval of the inadequate EIS and ROD challenged in this action, and for FHWA's decision to proceed with the challenged project despite the inadequate assessments.

37. Defendant National Marine Fisheries Service ("NMFS") is an agency of the U.S. Government and a subdivision of the National Oceanic and Atmospheric Administration within the U.S. Department of Commerce. NMFS administers the ESA for marine species, and issued

the Consultation Letter, attached hereto as Exhibit 2, challenged in this action. NMFS was responsible for ensuring that the document complied with the ESA and its implementing regulations.

38. Christopher J. Oliver is the Assistant Administrator for NMFS, the highest-ranking official within NMFS, and is sued in that official capacity. Assistant Administrator Oliver had the final authority over NMFS' preparation and approval of the inadequate Consultation Letter in this action.

39. Defendants USFWS and Greg Sheehan, NCDOT and James H. Trogon III, NMFS and Christopher J. Oliver, and FHWA and John F. Sullivan III are herein referred to collectively as "Defendants."

FEDERAL STATUTORY AND REGULATORY BACKGROUND

Endangered Species Act ("ESA")

40. Congress enacted the ESA because human activities have caused many species to go extinct and other species "have been so depleted in numbers that they are in danger of or threatened with extinction." 16 U.S.C. §§ 1531(a)(1)-(2). "The plain intent of Congress in enacting this statute was to halt and reverse the trend toward species extinction, whatever the cost." *Tennessee Valley Auth. v. Hill*, 437 U.S. 153, 184 (1978).

41. Accordingly, under the ESA, "all Federal departments and agencies shall seek to conserve endangered species and threatened species." 16 U.S.C. § 1531(c)(1). To "conserve" means to use "all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary." *Id.* § 1532(3). This may include, but is not limited to, "all activities associated with scientific resources management such as research, census, law enforcement,

habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.” *Id.*

42. The ESA’s primary goal is to “preserve the ability of natural populations to survive in the wild.” *Trout Unlimited v. Lohn*, 559 F.3d 946, 957 (9th Cir. 2009). The purpose of the ESA “is to promote populations that are self-sustaining without human interference.” *Id.*; *see also* 16 U.S.C. §§ 1531(b) (purpose includes preservation of ecosystems on which endangered and threatened species depend), 1539(a)(2)(B) (incidental take not to “appreciably reduce the likelihood of the survival and recovery of the species in the wild”); H.R. REP. NO. 95-1625 at 5 (1978), *as reprinted in* 1978 U.S.C.C.A.N. 9453, 9455; 50 C.F.R. § 402.02 (“jeopardize” means to reduce likelihood of survival “in the wild”); U.S. FISH & WILDLIFE SERV. AND NAT’L MARINE FISHERIES SERV., ENDANGERED SPECIES CONSULTATION HANDBOOK 4-37 (1998) (explaining that jeopardy analysis frames survival “in terms of the species’ reproduction, numbers, and distribution in the wild”).

43. In furtherance of the conservation goals of the ESA, Section 9 of the Act makes it illegal for any person—including governmental agencies—to “take” any endangered species, except as specifically authorized by USFWS. 16 U.S.C. § 1538(a)(1)(B). In general, this prohibition also applies to threatened species managed by USFWS. 50 C.F.R. § 17.31(a). It is also unlawful for any person to violate regulations pertaining to threatened or endangered species. 16 U.S.C. § 1538(a)(1)(G).

44. It is unlawful for “any person” to “cause to be committed” any offense described in Section 9, including take of threatened or endangered species, or a violation of regulations

pertaining to these species. *Id.* § 1538(g). The term “person” includes “any officer, employee, agent, department, or instrumentality of the Federal Government.” *Id.* § 1532(13).

45. The ESA defines “take” as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect,” or attempt to do any of those things. *Id.* § 1532(19). Take is defined “in the broadest possible manner to include every conceivable way in which a person . . . can ‘take’ or attempt to ‘take’ any fish or wildlife.” *Defenders of Wildlife v. U.S. Env’tl Prot. Agency*, 882 F.2d 1294, 1300 (8th Cir. 1989).

46. “Harm” means “an act which actually kills or injures wildlife,” including habitat modification or degradation that “injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.” 50 C.F.R. § 17.3. “Harass” means “an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering.” *Id.*

47. Section 7 of the ESA prohibits federal agency actions that may jeopardize the survival and recovery of any threatened or endangered species. Each federal agency must “insure” that “any action authorized, funded, or carried out by [the] agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species.” *Id.* § 1536(a)(2). To “jeopardize” a species means to engage in an action that could reduce appreciably the likelihood of both survival and recovery of a listed species in the wild. 50 C.F.R. § 402.02. A federal agency’s grant of permits or authorizations constitutes agency action subject to the requirements of Section 7. *Id.* § 402.02(c).

48. Section 7 of the ESA establishes an interagency consultation process that agencies must follow to fulfill their substantive mandate to avoid jeopardizing endangered or threatened species and harming their habitat. This process contains two major steps.

49. First, a federal agency proposing to take some action—termed the “action agency”—must request information from USFWS or NMFS¹ concerning whether any species that has been listed or is proposed to be listed is present in the area of the proposed action. 16 U.S.C. § 1536(c)(1); *see* 50 C.F.R. § 402.12(c).

50. If USFWS or NMFS determines that listed species may be present, the action agency must conduct a “biological assessment” that identifies “any endangered species or threatened species which is likely to be affected” by the proposed action. 16 U.S.C. § 1536(c)(1). The biological assessment must “evaluate the potential effects of the action on listed and proposed species and designated and proposed critical habitat and determine whether any such species or habitat are likely to be adversely affected by the action.” 50 C.F.R. § 402.12(a).

51. The action area for purposes of evaluating the effects of the action “means all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.” 50 C.F.R. § 402.02.

52. Once complete, the action agency must submit the biological assessment to USFWS or NMFS for review. *Id.* § 402.12(j). If the biological assessment shows that “there are no listed species or critical habitat present that are likely to be adversely affected by the action and [USFWS or NMFS] concurs . . . then formal consultation is not required.” *Id.* § 402.12(k)(1).

¹ USFWS has jurisdiction over terrestrial species, while NMFS has jurisdiction over marine species.

53. The second major step in the ESA consultation process, if necessary, is formal consultation. An agency may not take any action that might affect any listed species or critical habitat without first consulting with USFWS or NMFS. 16 U.S.C. §§ 1536(a)(2), 1536(b); 50 C.F.R. §§ 402.14(g)(8), (h)(3). During formal consultation, USFWS or NMFS must determine whether the proposed action, taken together with cumulative effects, is likely to jeopardize the existence of a threatened or endangered species in the wild or result in the destruction or adverse modification of critical habitat. 50 C.F.R. §§ 402.02, 402.14(g)(3)-(4); 16 U.S.C. § 1536(b)(3)-(4).

54. USFWS and NMFS set forth a determination in a “biological opinion.” 16 U.S.C. § 1536(b)(3)(A); 50 C.F.R. § 402.14(h). A biological opinion must include a summary of the information upon which the opinion is based, including an evaluation of “the current status of the listed species,” the “effects of the action,” and “cumulative effects.” 50 C.F.R. §§ 402.14(h); *id.* 402.14(g)(2), (g)(3). “Effects of the action” include both direct and indirect effects of an action “that will be added to the environmental baseline.” *Id.* § 402.02. The “environmental baseline” includes “the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early Section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process.” *Id.*

55. “Cumulative effects” include “future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area.” *Id.*

56. During the consultation process, each agency must use the best scientific data available. 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(g).

57. If in the biological opinion USFWS on NMFS concludes that the action is likely to jeopardize an endangered or threatened species or destroy or adversely modify critical habitat, it must list “reasonable and prudent alternatives” that would avoid jeopardy. 16 U.S.C. § 1536(b)(3)(A); 50 C.F.R. § 402.14.

58. On the other hand, if the consulting agency concludes that the action is not likely to jeopardize an endangered or threatened species or destroy or adversely modify critical habitat, but could take listed species, it must issue an “incidental take statement” that (1) specifies the amount or extent of anticipated take; (2) specifies reasonable and prudent measures to minimize adverse impacts; and (3) prescribes mandatory terms and conditions for the action. 16 U.S.C. § 1536(b)(4); 50 C.F.R. § 402.14(i).

59. The incidental take statement functions as an exemption from the broad prohibition on take established in Section 9, for any incidental taking that is in compliance with the terms and conditions of the statement. *See* 16 U.S.C. § 1536(o)(2).

60. If the incidental take statement uses a surrogate measure to express the amount of incidental take, it must “[d]escribe[] the causal link between the surrogate and take of the listed species, explain[] why it is not practical to express the amount or extent of anticipated take or to monitor take-related impacts in terms of individuals of the listed species, and set[] a clear standard for determining when the level of anticipated take has been exceeded.” 50 C.F.R. § 402.14(i).

61. Whenever possible, the incidental take statement’s specification of the amount of anticipated take “should be a specific number” of individuals that may be taken by the project. *Arizona Cattle Growers’ Ass’n v. U.S. Fish and Wildlife Serv.*, 273 F.3d 1229, 1249 (9th Cir. 2001); *Oregon Nat. Res. Council v. Allen*, 476 F.3d 1031, 1037 (9th Cir. 2007) (“Congress has

clearly declared a preference for expressing take in numerical form.”); *Miccosukee Tribe of Indians of Fla. v. United States*, 566 F.3d 1257, 1275 (11th Cir. 2009) (“[S]pecific population data is required unless it is impractical.”); ESA Handbook, 4-50 (expressing preference for a “specific number”).

62. If the amount of take specified in the incidental take statement is exceeded, the action agency must immediately reinitiate consultation. 50 C.F.R. 402.14(i)(4).

63. The ultimate duty to ensure that an action does not jeopardize listed species lies with the action agency, irrespective of the consultation process.

64. An action agency’s reliance on an inadequate, incomplete, or flawed biological opinion to satisfy its duty to avoid jeopardy is arbitrary and capricious. *See, e.g., Wild Fish Conservancy v. Salazar*, 628 F.3d 513, 532 (9th Cir. 2010); *City of Tacoma, Wash. v. FERC*, 460 F.3d 53, 75–76 (D.C. Cir. 2006). By extension, an incidental take statement accompanying such a flawed Biological Opinion cannot shield the action agency from liability for taking species in violation of ESA Section 9.

National Environmental Policy Act

65. NEPA requires a federal agency to prepare and adopt an EIS before undertaking a major action that will significantly affect the quality of the human environment. 42 U.S.C. § 4332(2)(C).

66. To implement the requirements of the statute, the Council on Environmental Quality (“CEQ”) has promulgated NEPA regulations that are applicable to all federal agencies. *See* 40 C.F.R. §§ 1500-1508.

67. The EIS requirement serves both internal and external functions. Internally, creating an EIS ensures that the agency will take a hard look at the direct, indirect, and cumulative environmental impacts of a proposed action. It also guarantees that the agency will

consider a range of reasonable alternatives to accomplish the underlying goals of the proposed action—including options that may have fewer adverse impacts on the environment—before deciding whether to undertake the project as originally proposed. Externally, the EIS provides detailed public information about the proposed action, its impacts, and reasonable alternatives, so that the public and other government agencies may be informed participants in the decision-making process.

68. The purpose of NEPA documents is to “[s]erve as the means of assessing the environmental impact of proposed agency actions, rather than justifying decisions already made.” 40 C.F.R. § 1502.2(g). To this end, NEPA requires that information be made available to “public officials and citizens before decisions are made and before actions are taken.” *Id.* § 1500.1(b).

69. NEPA regulations require that an EIS contain a statement regarding the proposed action that “briefly specif[ies] the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action.” 40 C.F.R. § 1502.13.

70. NEPA also requires that an EIS include a “detailed statement” regarding “alternatives to the proposed action.” 42 U.S.C. § 4332(2)(C)(iii). In preparing this statement, an agency must rigorously explore and objectively evaluate all reasonable alternatives that could achieve the underlying project purpose. 40 C.F.R. § 1502.14(a).

71. This alternatives analysis is “the heart of the environmental impact statement,” and should “present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision-maker and the public.” *Id.* § 1502.14. Only those alternatives that are deemed to be unreasonable can be eliminated from study. *Id.*

72. NEPA further requires that decisions be based on “high quality” information. 40 C.F.R. § 1500.1(b). “Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA.” *Id.*

73. The “effects” of the various project alternatives that must be discussed in an EIS include, among other considerations, direct, indirect, and cumulative effects. 40 C.F.R. §§ 1502.16, 1508.7.

74. The NEPA regulations define “direct effects” as effects “which are caused by the action and occur at the same time and place.” 40 C.F.R. § 1508.8(a).

75. NEPA regulations define “indirect effects” as effects “which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.” 40 C.F.R. § 1508.8(b). Further, indirect effects may include “growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.” *Id.* § 1508.8(b).

76. NEPA regulations define “cumulative impact” as the “impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. 40 C.F.R. § 1508.7

77. Another important ingredient of an EIS is a detailed discussion of possible measures to mitigate adverse environmental consequences. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 351 (1989). The alternatives analysis must “include appropriate

mitigation measures not already included in the proposed action or alternatives.” 40 C.F.R. § 1502.14(f).

78. The NEPA regulations require that an EIS shall include a discussion of the “natural or depletable resource requirements and conservation potential of various alternatives and mitigation measures.” 40 C.F.R. § 1502.16(f). The regulations also require that an EIS include discussion of the means to mitigate adverse environmental impacts that are not fully covered by the alternatives analysis. 40 C.F.R. § 1502.16(h).

79. In a revised EIS, the agency must also assess, consider, and respond to all comments submitted to the previous draft EIS. 40 C.F.R. § 1503.4. While the agency need not respond individually to every comment, it must “reasonably respond to those comments that raise significant problems.” *State of N.C. v. FAA*, 957 F.2d 1125, 1135 (4th Cir. 1992).

80. NEPA further requires that every EIS must be prepared with objective good faith and must fully and fairly discuss, among other things, the adverse environmental effects of the proposed action and the alternatives to the proposed action that may avoid or minimize these adverse effects. 42 U.S.C. § 4332(2)(C) and (E).

81. A federal agency’s obligation to evaluate the environmental impacts of a proposed action using high-quality and up-to-date information continues throughout the NEPA review process, including after an EIS has been finalized. An agency must prepare a supplemental EIS (“SEIS”) if “[t]he agency makes substantial changes in the proposed action that are relevant to environmental concerns” or if “[t]here are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.” 40 C.F.R. § 1502.9(c)(1).

82. In determining whether to prepare an SEIS, the agency must take a “hard look at the proffered new information.” *Hughes River Watershed Conservancy v. Glickman*, 81 F.3d 437, 443 (4th Cir. 1996).

83. The agency must “prepare, circulate, and file a supplement to a statement in the same fashion (exclusive of scoping) as a draft and final statement” unless CEQ approves alternative procedures. 40 C.F.R. § 1502.9(c)(4).

Administrative Procedure Act

84. The APA provides that a “person suffering legal wrong because of agency action, or adversely affected or aggrieved by agency action within the meaning of a relevant statute, is entitled to judicial review thereof.” 5 U.S.C. § 702.

85. The APA provides that a court shall set aside agency “findings, conclusions, and actions” that are “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2)(A). The APA grants to a reviewing court the authority to “compel agency action unlawfully withheld or unreasonably delayed.” *Id.* § 706(1).

86. The final consultation decision of USFWS or NMFS—such as a biological opinion or letter of concurrence—is a final agency action within the meaning of the APA and accordingly is judicially reviewable under § 704 of that act. *Dow AgroSciences LLC v. Nat’l Marine Fisheries Serv.*, 637 F.3d 259, 261 (4th Cir. 2011).

FACTS

87. This lawsuit concerns the environmental impacts of a proposed toll highway project in the Raleigh, North Carolina metropolitan area. The Complete 540 project would extend the Triangle Expressway twenty-seven miles from the N.C. 55 Bypass in Apex to U.S.

64/U.S. 264 (I-495) in Knightdale. The project has been dubbed “Complete 540” because it would complete the imagined “540 Outer Loop” around the greater Raleigh area.

88. The project is being carried out by NCDOT and FHWA. The project will require a permit under section 404 of the Clean Water Act from the U.S. Army Corps of Engineers. FHWA and the U.S. Army Corps of Engineers are the “action agencies” for purposes of the ESA.

89. At a cost of approximately \$2.2 billion, Complete 540 would be the most expensive highway ever built in North Carolina. Much of the project will be financed with revenue from tolls, limiting access for low-income members of the Raleigh area who nonetheless will be forced to endure the pollution and ancillary traffic that the project generates. Furthermore, despite its enormous cost, the benefits of the project are minimal.

90. It is commonly recognized that additional highway capacity, especially on the urban fringe of a fast-growing metro area, leads over time to significant impacts in land use and residential and commercial development, among other environmental impacts.

91. NCDOT’s own analysis shows that the \$2.2 billion investment will do little to improve congestion on existing roadways. According to NCDOT’s projections, if the project is built, by 2040 it will cause 12 primary corridors to be more congested during the day, whereas if it is not built only 7 primary roadways would be congested. The project will actually increase “vehicle-hours traveled” on multiple local roads by 2040, including segments of important arterials such as I-40, I-540, US 1, US 70 Business, US 401, NC 55, NC 210, Tryon Road, Poole Road, and Cleveland School Road.

92. The Complete 540 project will induce development, leading to additional development that will affect air quality, water quality, wetlands, and wildlife, including the endangered—dwarf wedgemussel, threatened yellow lance, and endangered Atlantic sturgeon.

93. The Complete 540 toll highway project will cause severe environmental degradation. According to the final environmental impact statement for the project, prepared pursuant to NEPA, the project as planned will impact 59,533 feet of streams, 145 acres of buffers, and 156 different wetlands comprising 69.5 acres. The final environmental impact statement lacks details as to the precise nature of these stream and wetland impacts.

94. The Complete 540 project will lead, over time to additional vehicle miles traveled (“VMT”) in the Raleigh metro area and significant impacts to land use, residential and commercial developments and other environmental concerns.

95. Increases in the number of VMT in a given area can lead to increases in the levels of air pollutants including ozone and greenhouse gases (“GHGs”).

96. Moreover, NCDOT’s analysis shows that less expensive alternatives that would not impose such devastating impact on the environment would provide an overall level of benefit similar to the proposed toll highway. Alternatives that focus on improving existing highways, such as the “Improve Existing Arterials” or “IE3-A” that NCDOT has studied, would yield around one half of the mobility gains and **more** congestion relief than the Toll Highway. Tables in NCDOT’s traffic analysis show that a new location highway is expected to reduce congested VMT, by just 12.06% in the study area while IE3-A is expected to improve the same measure by 22.49%.

97. This lawsuit concerns the toll highway’s impacts on the social, economic, and health of communities near the Complete 540 project and on three species that have been listed

by USFWS as at risk of extinction, the endangered dwarf wedgemussel, the threatened yellow lance, and the endangered Atlantic sturgeon.

Flawed NEPA Review Process

98. In the early 1990's, NCDOT designated a route for Complete 540 under the North Carolina Map Act. N.C. GEN. STAT. § 136-44.50. By so designating, NCDOT limited and discouraged the development of property in this corridor.

99. The corridor that was protected from development is largely the route that would later become known as the "Orange route" and ultimately the corridor that was selected for construction by the Transportation Agencies.

100. NCDOT did not exercise its Map Act authority to limit development in any of the other alternative corridors.

101. The reservation of protected corridors pursuant to the Map Act without providing just compensation to property owners was determined to be unconstitutional by North Carolina's Supreme Court in June 2016. *Kirby v. N. Carolina Dep't of Transportation*, 368 N.C. 847, 856, 786 S.E.2d 919, 926 (2016).

102. In January 2010, the Transportation Agencies began scoping the Complete 540 project under NEPA.

103. Early in the scoping process, USFWS raised concerns about impacts to the dwarf wedgemussel noting that impacts would include direct effects from project construction and indirect effects on water quality from secondary development.

104. In 2011, the Transportation Agencies developed a statement of purpose and need for the project. The primary purpose of the project was "to improve mobility within or through

the study area during peak travel periods.” The secondary purpose was “to reduce forecast congestion on the existing roadway network within the project area.”

105. The Transportation Agencies used a quartile ranking system to screen out all non-highway alternatives, upgrades to the existing highway system, and hybrid alternatives.

106. The Transportation Agencies designated a number of different new-location highway alternative corridors and labeled them with different colors.

107. NCDOT repeatedly suggested that the “Red Route” should be removed from study. NCDOT also stated publicly that the red route would never be built.

108. In 2011, the North Carolina General Assembly passed North Carolina Session Law (“NCSL”) 2011-7 which prohibited study of any routes north of the Orange Route, thereby eliminating consideration of the Red and Pink routes.

109. Subsequent to the passage of NCSL 2011-7, FHWA and the U.S. Army Corps of Engineers informed NCDOT that it would cease study of Complete 540 as the federal agencies could not comply with their responsibilities under NEPA and the Clean Water Act if the Red Route was not studied.

110. In 2013, NCSL 2011-7 was repealed and study of Complete 540 was able to recommence.

111. In December 2013, the Transportation Agencies selected 17 “Detailed Study Alternatives” (“DSAs”) to study in detail. All were route variations of a new location toll highway.

112. On November 2, 2015 the Transportation Agencies published a Draft Environmental Impact Statement (“DEIS”) for the project.

113. The DEIS included no detailed study of anything other than the 17 DSAs, i.e. all toll highway alternatives.

114. The DEIS did not include detailed information about how wildlife, water quality, air quality, climate change, and environmental justice populations would be impacted by the different DSAs.

115. The DEIS included only a “qualitative” study of indirect and cumulative effects.

116. The DEIS acknowledged that it was based on traffic forecasts that employed a single set of socio-economic data (which included the highway) for both “Build” and “No Build” forecasts.

117. The DEIS did not include a financial plan for the project, or explain how it would be funded.

118. The DEIS did not include information about mitigation for the massive impacts of the project.

119. On January 8, 2016 the Southern Environmental Law Center (“SELC”) timely submitted voluminous comments on the October 2015 DEIS on behalf of Sound Rivers and Clean Air Carolina. SELC’s comments raised a number of substantive issues, including the arbitrary methodology, the inadequate range of alternatives considered, and failure to evaluate adequately the environmental impacts of the project.

120. Members of Clean Air Carolina and Sound Rivers and their attorneys attended and spoke at public meetings hosted by NCDOT in early 2016, raising similar concerns.

121. In February 2016 the Transportation Agencies announced the selection of their preferred alternative—“DSA 2”—which includes the Orange Route.

122. On December 21, 2017, Defendants NCDOT and FHWA issued a Final Environmental Impact Statement (“FEIS”) for the Complete 540 project.

123. The FEIS failed to cure almost all of the substantial omissions and misstatements of the DEIS.

124. The FEIS included a “quantitative” study of indirect and cumulative effects (“ICE”). In this study the Transportation Agencies modeled, for the first time, the impact that the highway would have on congestion in the existing highway system.

125. The Quantitative ICE shows that rather than improve congestion, the preferred alternative will cause more corridors to be congested than under “No Build” conditions.

126. The FEIS did not include an analysis of travel time savings for individuals using the existing highway system for different project alternatives.

127. NCDOT’s analysis of environmental justice communities did not acknowledge that the proposed highway’s tolls will have an adverse effect on minority and low-income populations.

128. NCDOT’s response dismissed comments about the disproportionate impact of tolling, stating merely that the project will provide benefits for the entire community by easing traffic congestion.

129. The FEIS included no discussion of the demographics of populations that will be most affected by tolling, stating that tolls will burden “some motorists” but omitting any discussion the demographics of those motorists.

130. Despite comments urging the Transportation Agencies to evaluate air quality, the FEIS merely noted that future vehicle requirements, projected to be in effect by 2050, will offset new mobile source air toxics (“MSATs”).

131. Specifically, the FEIS's Air Quality report used the EPA's MOVES2014a model, which incorporated the 2012 corporate average fuel economy ("CAFE") standards and CO₂ standards. *See* Official Release of the MOVES2014 Motor Vehicle Emissions Model for SIPs and Transportation Conformity, 79 Fed. Reg. 60,343, 60,344 (Oct. 7, 2014).

132. The Transportation Agencies failed to acknowledge that the EPA is currently repealing these requirements, and failed to acknowledge that even if the requirements do take effect, MSATs may increase before vehicle regulations have a mitigating impact.

133. On August 24, 2018, EPA and the National Highway Traffic Safety Administration ("NHTSA") published a proposed rule in the Federal Register that would significantly alter the current CAFE and CO₂ standards that have been in place since 2012. 83 Fed. Reg. 42,986. The agencies' proposal would "freeze" CAFE and CO₂ standards at 2020 levels through 2026 rather than imposing incrementally more stringent standards year-by-year, as previously planned under the 2012 regulations.

134. On August 28, 2018, SELC submitted a letter to Secretary of Transportation Chao, Acting Administrator of FHWA Hendrickson, and Acting Administrator of the U.S. Environmental Protection Agency ("EPA") Andrew Wheeler notifying those agencies of SELC's concerns about how this proposed rollback of the CAFE and CO₂ standards will nullify environmental reviews performed under NEPA and the Clean Air Act that rely on those standards. Secretary Chao received this letter on August 31, 2018; Acting Administrator Hendrickson received the letter on September 5, 2018; and Acting Administrator Wheeler received the letter on September 4, 2018.

135. As explained in SELC's letter, whereas the existing "Clean Car Rules" were expected to save approximately 4 billion barrels of oil and reduce GHG emissions by the

equivalent of approximately 2 billion metric tons over the lifetimes of light-duty vehicles produced between 2017 and 2025, the proposed rule would *increase* petroleum consumption by half a million barrels per day by the early 2030s.

136. The MOVES2014 models project future car emission levels based on the 2012 CAFE and CO₂ rules. Thus, the proposed repeal will render the MOVES2014 models, as well as any documents relying on their results, obsolete and inaccurate. By invalidating the air quality models on which the FEIS depends, the repeal of the Clean Car Rules constitutes significant new information relevant to environmental concerns and bearing on the environmental impact of the Complete 540 project.

137. The air quality report for accompanying the FEIS for Complete 540 concluded that any increase in vehicle emissions that the project would cause would be offset by the emissions reductions caused by the increased efficiency of new vehicles produced under the 2012 Clean Car Rules. This assertion is unsustainable in light of the impending repeal of these rules, and the dramatic increase in emissions that will be caused by the repeal of the Clean Car Rules also constitutes significant new information relevant to environmental concerns and bearing on the environmental impact of the Complete 540 project.

138. The Transportation Agencies failed to consider localized impacts of short term increases in MSATs.

139. The Transportation Agencies failed to analyze the health impacts of MSATs increases to the greatest extent practicable and introduced unsubstantiated doubt about the health risks in the Air Quality report.

140. The FEIS did not analyze indirect and cumulative effects on air quality.

141. The FEIS included no analysis of greenhouse gas emissions and climate change, nor did the FEIS include any explanation as to why such an analysis could not be performed.

142. The FEIS and related reports list bodies of water affected and review water quality in relation to dwarf wedgemussel viability, but failed to provide details about water quality impacts.

143. The FEIS included only a minimal assessment of project impacts to streams and wetlands. The documents acknowledge that Complete 540 will “affect” over 50,000 feet of streams and over 60 acres of wetlands, but does not include any substantive analysis of what ecological impacts the project will actually have. The FEIS did not include an assessment of the relative importance of these particular streams and wetlands to the watershed and to the ecosystem. The FEIS did not include an assessment of the potential indirect effects on adjacent waters.

144. The FEIS did not include a comparison of the impacts to streams and wetlands under the selected alternative versus the impacts to those resources under a No-Build alternative.

145. The FEIS did not describe how minimization of impacts to streams and wetlands would benefit water quality and habitat. The documents state that the highway plan has been altered to reduce impacts on streams by 9.5 percent, and on wetlands by 4.8 percent, but contain no discussion of what specific environmental impacts these small reductions would avoid, much less what the ecological significance—if any—of these reductions would be.

146. The FEIS did not include any details about stream and wetland mitigation, despite the huge amount of impact to those resources that is expected.

147. Despite comments demonstrating that water quality conditions should be expected to change, the FEIS relied on baseline conditions for water quality that are unreliable, and buffer standards that are no longer legally required.

148. The Transportation Agencies failed to take a hard look at the impacts that Complete 540 would have on endangered, threatened, sensitive and rare species in the area. The Transportation Agencies failed to study and discuss the impacts to the ecosystems of these species due to habitat loss and fragmentation.

149. The Transportation Agencies failed to adequately study and document the impacts of the project to endangered and threatened species listed under the ESA.

150. Four rare aquatic species are being studied to consider whether they should be listed as endangered or threatened under the ESA, including the Neuse River Waterdog and the Carolina Madtom. The FEIS does not include an analysis of impacts to these species, or present the impacts of different alternatives to these species in a comparative way.

151. Despite comments urging a full consideration of less expensive and less environmentally damaging alternatives and explaining the flaws of methodology used to screen alternatives, the FEIS did not adequately consider reasonable alternatives to the preferred alternative and continued to use arbitrary and outdated methodology.

152. The FEIS did not re-analyze alternatives that were discarded based on outdated data and arbitrary forecasting methodologies.

153. On February 1, 2018, the Center timely submitted comments on the December FEIS, raising a number of concerns including threats to imperiled species in the project study area.

154. On February 22, 2018 SELC timely submitted voluminous comments on the December FEIS on behalf of Sound Rivers and Clean Air Carolina. SELC's comments raised a number of substantive issues, including the arbitrary methodology, the inadequate range of alternatives considered, and failure to evaluate adequately the environmental impacts of the project.

155. With their comments, the Conservation Groups presented an alternative solution to the Transportation Agencies entitled ACCESS2040.

156. ACCESS2040 was prepared by expert transportation planner Walter Kulash. It is a feasible alternative solution centered on upgrades to the existing highway system. ACCESS2040 would mitigate environmental impact, improve mobility by half as much as Complete 540, and relieve traffic congestion more than Complete 540. ACCESS2040 would accommodate a wider range of users than Complete 540 by facilitating bicycle and pedestrian travel, and encouraging more public transit. ACCESS2040 is significantly less expensive than Complete 540.

157. ACCESS2040 would meet the purpose and need established for the Complete 540 project and outperforms Complete 540 for at least one of the project's stated purposes.

158. On June 6, 2018, FHWA completed the NEPA process by issuing the ROD selecting DSA 2 as the selected alternative for Complete 540.

159. The ROD did not include adequate responses to comments about the shortcomings of the FEIS or corrections to any of its shortcomings.

160. The ROD included a short dismissive review of ACCESS2040 that relied on wrong assumptions, included false conclusions, and failed to seriously consider the alternative in any detail.

161. The ROD did not include any details about the mitigation that will be used to offset impacts to streams and wetlands. Instead, the ROD simply states that “unavoidable impacts to wetlands and streams” will be “offset” through consultation with the North Carolina Division of Mitigation Services (NCDMS), the use of “private mitigation banks,” and a single, unidentified stream mitigation site.

162. The ROD was published in the Federal Register on June 25, 2018. Notice of Final Federal Agency Actions on Proposed Highway in North Carolina, 83 Fed. Reg. 29,602.

Endangered Species Act Review

Dwarf Wedgemussel

163. The dwarf wedgemussel is a small bivalve that rarely exceeds 45 mm (about 1 ¾ inches) in length. Its thin shell is usually greenish-brown with green rays, turning black or brown and thickening somewhat with age. The mussel’s lifespan is about 12 years. The dwarf wedgemussel’s habitat includes streams and rivers ranging from 5 to 100 meters wide, where it resides in shallow areas near the banks.

164. Female dwarf wedgemussels become gravid (full of eggs) in the early fall and glochidia (larva) are released by mid-spring. Glochidia attach to fish with a hook-like appendage in order to hitchhike to new areas, using the fish as a means of dispersal. Mussel glochidia are generally species-specific and will only live if they find the correct fish. For the dwarf wedgemussel, the fish species that have been identified as possibly supporting dwarf wedgemussel reproduction are the tessellated darter (*Etheostoma olmstedi*), johnny darter (*Etheostoma nigrum*), and mottled sculpin (*Cottus bairdi*). After several weeks, the glochidium

detaches itself from the unharmed fish and drops to the river bottom, where it begins life as a juvenile mussel.

165. The dwarf wedgemussel was listed as endangered under the ESA on March 14, 1990. 55 Fed. Reg. 9447-51.

166. The threats to the dwarf wedgemussel are numerous, including habitat destruction through damming and channelization of rivers, other riparian disturbances, pollution, sedimentation, impoundments, artificial flow regimes, and stream fragmentation. The 1993 Recovery Plan for the mussel identifies the top four threats as impoundments, pollution, riverbank alteration, and siltation.

167. USFWS has found that little riverine and riparian habitat nearby or adjacent to dwarf wedgemussel populations is protected other than by state and local land use regulations, and therefore that development of adjacent uplands continues to be a significant and pervasive threat to southern populations.

168. These and other impacts can disrupt mussel life cycles, prevent the migration of fish carrying glochidia, block gene flow, and prohibit recolonization, resulting in reduced “recruitment” rates (addition of mussels by birth or immigration), decreased population densities, and increased probability of local extinctions.

169. In addition, the toxic impacts of industrial, domestic, and agricultural pollution, including runoff, are primary threats to the mussel’s survival.

170. The species’ relatively short lifespan, low population densities, low reproductive rate, dependence on specific fish species, and limited ability of those fish to disperse into new areas all combine with the threats describe above to contribute to putting the dwarf wedgemussel at risk of extinction.

171. Historically, the dwarf wedgemussel's range extended from North Carolina at the southern extremity north all the way into New Brunswick, Canada, recorded in 70 localities in 15 river basins spanning 11 states and one Canadian province. The mussel is now extinct in Canada, and gone from the main body of the Neuse River.

172. In the remainder of its historic range, the mussel exists in much lower densities than in the past, including in North Carolina. USFWS has found that increased development in the Neuse River Basin as the City of Raleigh grows will cause indirect impacts such as water quality degradation from upland development in the form of suburban and industrial runoff, river flow alteration, and fragmentation of two small populations by construction of the Buckhorn Reservoir. In a 2012 survey, USFWS found that out of the 11 stream reaches of the Neuse River that once were home to the dwarf wedgemussel, the animal could be found at only one: Swift Creek.

173. A population of dwarf wedgemussel has long persisted in Swift Creek, which is within the toll highway project area, and this Swift Creek population is essential to the recovery of the species: USFWS has identified this population as one that must be viable in order for the species ever to make progress towards recovery and be "down-listed" from endangered to threatened.

174. The dwarf wedgemussel has been found in Swift Creek in recent surveys conducted in connection with the Complete 540 project. A 2012 survey found 3 mussels in Swift Creek below Lake Benson. A 2014 "Phase 1" Dwarf Wedgemussel Viability Study reviewed a number of prior surveys concerning the dwarf wedgemussel's presence and historic and current ranges in Swift Creek, and the results were updated in a 2016 "Phase 2" viability study that located one mussel in 2016.

Yellow Lance

175. Like the dwarf wedgemussel, the yellow lance is a small bivalve. Its bright yellow shell is more than twice as long as it is tall, reaching just over 3 inches in length. The shell may have a waxy appearance and will show brownish ridges known as “growth rests” that show where the edge of the mussel’s shell was during earlier stages of its life.

176. The life cycle of the yellow lance is similar to that of the dwarf wedgemussel. Females expel glochidia into the river, which attach to certain fish for a few weeks before dropping off as juveniles mussels. The yellow lance relies on two species of minnow: white shiners (*Luxilus albeolus*) and pinewoods shiners (*Lythrurus matuntinus*).

177. The yellow lance lives in clean sand of coarse to medium grains, and sometimes in gravel, at the bottom of clean moderately flowing small to medium streams with high levels of dissolved oxygen.

178. The species’ historical range is from the Neuse River basin at the southernmost extremity north into Maryland. Currently, the yellow lance is still present in seven of the eight river basins of its historic range, having been extirpated from the Potomac River. The population in the remaining basins has declined in both number and distribution over the decades.

179. The yellow lance faces threats similar to those faced by the dwarf wedgemussel. Pollution from all sources easily harms mussels, which stay in one place during their adult lives and filter water from the water column to collect food. Sediment can easily make it difficult for mussels to feed or simply suffocate them. Dams disrupt river flow patterns and eliminate habitat, as well as preventing movement of the fish that yellow lance rely on as glochidia, isolating populations and increasing the likelihood that the fish and mussels will die out.

180. The yellow lance was listed as threatened under the Endangered Species Act on April 3, 2018. 83 Fed. Reg. 14189-98.

181. According to a 2018 species status report on which USFWS based, in part, its determination that the yellow lance is threatened, much of the geographic representation of the yellow lance has been lost: 70% has vanished from the coastal plain, and 56% from the Piedmont. Although the species persists in the majority of the river basins in its known historic range, it is represented by very few individuals in few locations. Of the eight historic populations, one has “moderate” resiliency, six of the remaining populations—including the Neuse—have “low” resiliency, and the population in the Potomac has been extirpated. During the most recent surveys in the Neuse River Basin, between 2014 and 2016, one individual mussel was found in 2015.

USFWS Consultation History

182. Complete 540 will directly harm dwarf wedgemussel and yellow lance. It will include two bridges spanning Swift Creek itself in the area most important to the dwarf wedgemussel, downstream of Lake Benson. Bridge bents (piles) may be as close as ten feet from the Swift Creek.

183. The highway will generate runoff contaminated with roadway pollutants and sediment. Drainage from bridge decks in the critical Swift Creek and Middle Creek Watersheds will simply be routed to land before it ultimately pours into water bodies. Spills of hazardous chemicals should follow road runoff into hazardous spill basins in some locations, but may occur in locations without these basins, or could still ultimately drain into Swift Creek despite them if the spill is larger than the basin can contain or is made so by combining with rainwater. Erosion control in the Swift Creek and Middle Creek Watersheds will be designed to provide protection

from 25-year storms; however, with global warming floods are becoming more frequent and more severe.

184. Since the dwarf wedgemussel was first discovered in Swift Creek in 1991, rapid development within the watershed below the Lake Benson Dam has severely impacted the mussel, resulting in a declining “catch per unit of effort.” However, in recent years, despite continuing development in the region, the population has begun to stabilize and reproduce.

185. During the history of this project, USFWS submitted multiple letters expressing concern about the toll highway project’s potential effects on the dwarf wedgemussel.

186. As early as 2009, USFWS staff began meeting with NCDOT and FHWA, and in early 2010 USFWS submitted its first letter to NCDOT expressing concerns about the project’s likely effects on the dwarf wedgemussel.

187. In its 2010 letter, USFWS stated that the proposed project would have “significant impacts on fish and wildlife resources, including impacts to streams, wetlands, upland forest and other habitat types,” in the form of loss of habitat and habitat fragmentation. It stated that it was “particularly concerned about impacts to the dwarf wedgemussel population in Swift Creek,” which would be “at risk from direct effects associated with construction of the project (e.g. erosion and siltation from construction area), and from indirect effects associated with the degradation of water quality from secondary development induced by the new road.” According to the letter, increased impervious surface and stormwater runoff from additional development would further degrade the water quality in Swift Creek and its tributaries, as had already happened in the preceding 10 to 15 years.

188. USFWS recommended that NCDOT “develop a strategy to avoid contributing to the degradation of the water quality of the Swift Creek watershed.” USFWS also recommended

moving the interchange with I-40 and US 70, which would be located “on top of several tributaries to Swift Creek and also in close proximity to Swift Creek mainstem.” The letter did not discuss mussel propagation.

189. The especially destructive interchange that NCDOT and FHWA plan to place “on top” of a key section of habitat within Swift Creek has not changed. During the planning process, NCDOT color-coded its different route alternatives. Complete 540 is based on the so-called “Orange Route,” which places the interchange on top of the key confluence identified by USFWS. Only one alternative route, the so-called “Red Route,” would have avoided these impacts.

190. USFWS submitted additional letters to FHWA or NCDOT in 2011, 2012, and 2015. It met with FHWA or NCDOT again in 2011, 2012, 2015, 2016, and four times in 2017.

191. In its 2015 letter, USFWS stated that “[o]verall, the project will have very substantial impacts on fish and wildlife resources, including impacts on streams, wetlands, upland forest and other habitat types,” taking the form of “direct loss of habitat and habitat fragmentation.” Addressing effects on the dwarf wedgemussel in particular, the agency reminded NCDOT that “[i]n previous correspondence and during the Service’s participation in interagency meetings, the service has frequently stated its concern regarding the likely adverse effects of the project on the dwarf wedgemussel within the Swift Creek watershed (Neuse River Basin).”

192. The agency requested further information beyond the “Phase 1” dwarf wedgemussel viability study in order to fully establish the baseline condition of the mussel and other questions regarding viability. USFWS again reminded NCDOT that the 1993 recovery plan “requires, among other criteria, that a viable population (i.e. a population containing a

sufficient number of reproducing adults to maintain genetic variability and annual recruitment adequate to maintain a stable population) occur in Swift Creek.” It stated that maintaining such a population was “vitally important,” and further emphasized: “We cannot understate [sic] the significance of this issue.”

193. In the same letter, USFWS stated a desire for a dedicated facility and staff to attempt to propagate the dwarf wedgemussel on a large scale. USFWS recommended that NCDOT and FHWA provide assistance in developing such a facility, and added, “[its] ability, or lack thereof, to propagate DWMs and augment the population in Swift Creek will factor significantly in our analysis to determine whether the Complete 540 project will jeopardize the continued existence of the species.”

194. Thus, in 2015, USFWS began discussing with FHWA and NCDOT a captive propagation program to improve the dwarf wedgemussel’s likelihood of survival, or “viability” in the Swift Creek Watershed.

195. In 2016, USFWS prepared a dwarf wedgemussel “viability study” for the Swift Creek watershed. Following this report, NCDOT and FHWA agreed to provide funding for a captive mussel propagation facility as a conservation measure.

196. In 2017, NCDOT and FHWA prepared a “biological assessment” in which FHWA requested formal consultation with USFWS concerning the project’s effects on the dwarf wedgemussel, and a separate conference concerning its effects on the yellow lance.

197. In January 2018, before the yellow lance was listed as threatened, USFWS provided FHWA and NCDOT with a draft biological opinion.

198. The final biological opinion (hereinafter the “USFWS Biological Opinion”) was released April 10, 2018, one week after the yellow lance was listed as threatened.

199. The Biological Opinion purports to analyze whether the project will put listed species—the dwarf wedgemussel and the yellow lance—in jeopardy of extinction.

200. The Biological Opinion concludes that Complete 540 is not likely to jeopardize the continued existence of the dwarf wedgemussel, *id.* at 22, or the yellow lance, *id.* at 26.

201. In support of its “no jeopardy” determination for each species, the Biological Opinion relies on conservation measures that it expects to “minimize and partially offset potential adverse effects” to them. *Id.* at 3.

202. The conservation measures include the proposed mussel propagation facility. *Id.* at 5.

203. The conservation measures also include a preconstruction survey to be performed at the Swift Creek crossing that will relocate mussels to another area or take them into captivity to serve as brood stock for the proposed propagation facility. *Id.* at 5.

204. The Biological Opinion relies on an “Indirect and Cumulative Effects Analysis” (“ICE”) prepared by NCDOT to stand for the proposition that the highway will not have a significant indirect impact on growth in the project area. NCDOT’s ICE analysis is, however, arbitrary and incorrect. As Plaintiffs noted in comments to NCDOT and USFWS in February 2018, the analysis stands in contrast to myriad statements from state, regional and local planners, the business community, and NCDOT itself, that the highway and the access it provides will lead to significantly higher levels of development than would occur if the project was not constructed. This phenomenon of “induced growth” has already been well documented along the existing stretches of I-540.

205. Because the Biological Opinion relied on the arbitrary ICE analysis, it fails to account for these indirect impacts and the effect they will have on the mussel populations.

206. The conservation measures do not address the indirect effects of induced growth, the effects of impacts to water quality from the project and induced growth, or negative impacts to the fish species on which the mussels rely. *Id.* at 3-6.

207. The environmental baseline for the dwarf wedgemussel purports to include all human activities in the action area, but does not discuss the proposed Atlantic Coast Pipeline. *Id.* at 10.

208. Among the effects to the dwarf wedgemussel from construction of the project, the Biological Opinion identifies construction-related harm; bridge debris infill; stream fill associated with culverts and bridge bents in tributaries that could be habitat for the mussels or supporting fish species; crushing these fish during construction; stranding the fish in isolated, overheated, or low-oxygen areas; driving the fish way with noise or underwater sound waves; and prolonged erosion and sedimentation from construction areas in close proximity to Swift Creek and its tributaries, including threats from major storms eroding soil from disturbed areas. *Id.* at 13-14.

209. The Biological Opinion allowed that a catastrophic failure of erosion controls could be lethal, but the true effect would be difficult to determine due to the dwarf wedgemussel's "small size and cryptic nature." *Id.* at 14.

210. Among the effects to the dwarf wedgemussel from operation of the project, the Biological Opinion identifies modification of stream flows and channel stability due to the presence of culverts and bridge bents; roadway runoff that includes contaminants such as heavy metals, inorganic salts, hydrocarbons, and suspended solids, to which mussels are among the most sensitive forms of aquatic life; and potential traffic accidents involving toxic chemicals. *Id.* at 14-15.

211. The Biological Opinion acknowledges that the dwarf wedgemussel has not been propagated and reintroduced in North Carolina. *Id.* at 18.

212. The Biological Opinion speculates that the propagation facility could generate an “ark” population of dwarf wedgemussels from the Neuse River basin to maintain the genetic stock, in case the mussels are locally extirpated as a result of projects like Complete 540. *Id.* at 19.

213. The Biological Opinion does not explain how the propagation facility could minimize take from the toll highway as opposed to offset the impacts of take. *Id.*

214. The proposed mussel propagation facility contemplated in the Biological Opinion is governed by at least two agreements, a January 5, 2018 “reimbursable agreement” and a February 27, 2018 “interagency agreement.”

215. In the reimbursable agreement between NCDOT and Wake County, the county agreed that if it receives funding from NCDOT it will renovate and add to an existing facility, and NCDOT agreed to reimburse Wake County up to 110% of the estimate cost of renovation of \$1,958,936. The agreement is contingent on NCDOT receiving a permit from the U.S. Army Corps of Engineers.

216. The reimbursable agreement references a memorandum of understanding between North Carolina State University (“NCSU”) and Wake County.

217. The interagency agreement between NCDOT and the North Carolina Wildlife Resources Commission (“NCWRC”) states that NCDOT has agreed to fund the operations and maintenance of the propagation program “for up to five (5) years,” and provides an anticipated funding amount of \$3,041,064.

218. The interagency agreement then provides that, subject to receiving this funding from NCDOT, NCWRC will provide the same funding for operations and maintenance of the program under some future agreement with NCSU, specifying that NCWRC is responsible only for managing and distributing funding for the program, and not for construction, operation or maintenance, “or achieving the Program’s propagation goals.”

219. The interagency agreement also provides that NCDOT is responsible solely for providing funding for the program, and not for “construction, management, operations or success of the Program, [the Yates Mill Aquatic Conservation Center] or its propagation goals.”

220. Despite the provision for potential cost overruns in the reimbursable agreement, the interagency agreement states that the “total maximum amount of funding available” for construction and operation and maintenance of the propagation program is \$5 million.

221. The reimbursable agreement and interagency agreement do not contain any specific provisions about how or when dwarf wedgemussels would be propagated, do not make any statements about releasing propagated dwarf wedgemussels, and do not once mention yellow lance.

222. The conservation measure based on potential relocation of mussels states that the mussels will be either relocated or captured to serve as brood stock without committing to either option, and acknowledges that either option constitutes take. Bi-op at 19.

223. The extent of the survey “has yet to be determined, but it will likely be very limited in scope.” *Id.*

224. The Biological Opinion gives similar, but even less thorough treatment to conservation measures for the yellow lance. *Id.* at 22-26.

225. The Biological Opinion contains a short incidental take statement (hereinafter the “Incidental Take Statement”).

226. The Incidental Take Statement does not determine the number of individual animals of each threatened or endangered species that the project will take.

227. For both the dwarf wedgemussel and the yellow lance, the Incidental Take Statement states that “we believe that incidental take for this species is difficult to determine.” *Id.* at 28. USFWS generally bases this determination on two assertions, without providing a basis for either of them: (1) mussels live underwater and are hard to monitor; and (2) the specific cause of a given harm to mussels can be difficult to determine.

228. The Incidental Take Statement states that “[i]ncidental take that occurs as harm resulting in injury or death from larger amounts of siltation or water quality degradation which temporarily disrupt movement, breeding, feeding, or sheltering of adult and juvenile [dwarf wedgemussel or yellow lance] or larval glochidia are likely not detectable or measurable,” but does not explain why such impacts are “likely not” detectable or measurable. *Id.*

229. The Incidental Take Statement also states that “[i]ncidental take that occurs as harm resulting in injury or death from larger amounts of siltation or water quality degradation would be difficult to determine,” but does not explain why such impacts would be difficult to determine. *Id.*

230. The Incidental Take Statement also states that take that results from harm to the fish on which mussels rely “would likely not be detectable or measureable,” but does not explain why. *Id.*

231. Instead of determining the number of individual animals that the project will take, the Incidental Take Statement then “specifies” the extent of take by using “miles of . . . stream

habitat as a surrogate measure” because of “the difficulty of detecting take of [dwarf wedgemussel or yellow lance] caused by the Action.” *Id.* at 28-29.

232. Using this “surrogate” measure of take, the Incidental Take Statement identifies 53 miles of potentially occupied stream habitat for the dwarf wedgemussel, and identifies the amount of take of dwarf wedgemussels as “all DWM (including adults, juveniles, and glochidia) harassed and/or harmed within the approximately 53 miles of stream habitat contained in the Action Area.” *Id.* at 28.

233. Similarly for the yellow lance, the Incidental Take Statement identifies 47 miles of “potentially occupied habitat for YL” and identifies the amount of take of yellow lance as “all YL (including adults, juveniles, and glochidia) harassed and/or harmed within the approximately 47 miles of stream habitat contained in the Action Area.” *Id.*

234. In other words, the Incidental Take Statement authorizes the amount of take of dwarf wedgemussels and yellow lance as simply whatever ends up being taken within the animals’ potentially-occupied habitat in the action area, up to and including 100%.

235. The Incidental Take Statement identifies two “reasonable and prudent measures”: (1) funding the mussel propagation facility; and (2) conducting a preconstruction survey to determine whether the dwarf wedgemussels and yellow lance used for the propagation facility will come from individual animals that are relocated to make way for the project or simply removed from populations in the wild. *Id.* at 29.

236. The Incidental Take Statement’s terms and conditions are limited to the following: (1) NCDOT must provide approximately \$2 million to Wake County to construct the mussel propagation facility; (2) NCDOT must provide approximately \$3 million to NCWRC’s Non-Game Aquatic Project Fund to operate the facility; and (3) NCDOT must conduct a

preconstruction survey to determine whether the dwarf wedgemussels and yellow lance used for the propagation facility will come from individual animals that are relocated to make way for the project or simply removed from populations in the wild. *Id.* at 29-30.

237. The Incidental Take Statement does not include any monitoring and reporting requirements at all, purportedly because the Service was “not able to provide specific instructions for such monitoring and reporting,” because “the Action Area is very large, and the amount or extent of incidental take is necessarily broadly defined using the surrogate measure of stream miles.” *Id.* at 30.

Atlantic Sturgeon

238. The Atlantic sturgeon is a prehistoric fish that can measure up to 14 feet in length and live up to 60 years. The Atlantic sturgeon is anadromous, meaning it travels between the open ocean and its natal streams where it spawns.

239. Atlantic Sturgeon historically inhabited 38 rivers along the Eastern seaboard, from Labrador south to the St. Johns River in Florida. Overfishing led to the collapse of the Atlantic Sturgeon population.

240. On February 6, 2012, NMFS listed NMFS listed four distinct population segments (“DPSs”) of the Atlantic sturgeon as endangered and one DPS as threatened under the Endangered Species Act. 77 Fed. Reg. at 5880; 77 Fed. Reg. at 5914. In particular, NMFS listed as endangered the Carolina DPS, which includes but is not limited to Atlantic Sturgeon within the Neuse River.

241. On August 17, 2017, NMFS finalized critical habitat designations for each of the DPSs, concluding that “each of these DPSs is at a low level of abundance and that successful reproduction and recruitment, which are essential to the conservation of the species, occur in a

limited number of rivers for each DPS.” Designation of Critical Habitat for the Endangered New York Bight, Chesapeake Bay, Carolina, and South Atlantic Distinct Population Segments of Atlantic Sturgeon and the Threatened Gulf of Main Distinct Population of Atlantic Sturgeon, 82 Fed. Reg. at 39160-61.

242. The critical habitat designation for the Carolina DPS includes the Neuse River from Pamlico Sound up to the site of the former Milburnie Dam.

243. Based on past survey data, NMFS believes the Neuse River may support a spawning population of Atlantic sturgeon, meaning that juvenile and adult sturgeon may be present in the river at different times of year.

244. In designating critical habitat, NMFS identified certain physical or biological features (“PBFs”) that are “essential to the conservation of the [Atlantic sturgeon] and that may require special management considerations or protection.” 82 Fed. Reg. 39217.

245. NMFS explained that in relation to the identified PBFs for Atlantic sturgeon critical habitat, “these PBFs may be ephemeral or vary spatially across time. Thus, areas designated as critical habitat are not required to have the indicated values at all times and within all parts of the area[.]” 82 Fed. Reg. at 39219.

246. The specific PBFs for Atlantic sturgeon include:

- Hard bottom substrate,
- Aquatic habitat with a gradual downstream salinity gradient of 0.5 up to as high as 30 ppt and soft substrate between the river mouth and spawning sites,
- Water of appropriate depth absent physical barriers to passage between the river mouth and spawning sites, which must ensure continuous flow in main river channels at any time any sturgeon would be in the river,

- Water, between the river mouth and spawning sites, with the temperature, salinity, and oxygen values that support different life stages of sturgeon.

82 Fed. Reg. 39219.

247. Atlantic Sturgeon face numerous threats, including impaired and limited habitat due to factors such as dams, dredging, degraded water quality from development and industrial pressures, and climate change.

248. Fluctuations in water quality features, such as increased siltation or sedimentation, low levels of dissolved oxygen, and warm temperatures, can negatively impact Atlantic sturgeon at various life stages.

NMFS Consultation History

249. When the Complete 540 FEIS and accompanying technical reports were released to the public on the NCDOT website on December 22, 2017, the Atlantic Sturgeon Biological Assessment was not included. The webpage link intended to include the Atlantic Sturgeon Biological Assessment instead took users to a one-page placeholder document that explained the Biological Assessment was not complete and a copy of the draft Biological Assessment would be provided upon request.

250. On January 4, 2018, counsel for Conservation Groups requested from NCDOT a copy of the draft Atlantic Sturgeon Biological Assessment. NCDOT staff responded that the purpose of the placeholder document online was to collect a list of interested individuals to whom to disseminate the final report upon its completion. NCDOT did not supply the draft Atlantic Sturgeon Biological Assessment to counsel—despite repeated requests—until January 16, 2018.

251. Conservation Groups and their counsel were never notified by NCDOT of when the final version of the Atlantic Sturgeon Biological Assessment was available. Counsel for Conservation Groups found the final Atlantic Sturgeon Biological Assessment available online on February 1, 2018—the day of the close of the general public comment period on the FEIS.

252. The Final Atlantic Sturgeon Biological Assessment identified a host of likely harmful impacts that could result to Atlantic Sturgeon and its habitat due to roadway construction projects, including direct physical loss and alteration of stream habitat, acoustic effects from construction, increased chemical and thermal pollution from construction and induced land changes, and temporary or permanent changes in water flow.

253. The Atlantic Sturgeon Biological Assessment acknowledged that Complete 540 could result in many of these impacts, including increasing pollution from highway runoff from 77 stream crossings and induced higher traffic volumes throughout Wake and Johnston Counties.

254. Despite generally recognizing the harmful impacts of the Complete 540 project, the Biological Assessment ultimately concluded: “Given the very low probability of Atlantic Sturgeon to occur within the action area, the projected insignificant and/or discountable effects to the PBFs within the critical habitat unit, and the implementation of avoidance and minimization measures, FHWA has determined that the Complete 540 project ‘May Affect, Not Likely to Adversely Affect’ the Atlantic Sturgeon” or its critical habitat. Atlantic Sturgeon BA at 42.

255. Relying on the Indirect and Cumulative Effects Memoranda prepared for the project FEIS, the Atlantic Sturgeon Biological Assessment concluded that water quality impacts in the Neuse River would be negligible.

256. The water quality models and parameters used in the ICE study, and incorporated into the Atlantic Sturgeon Biological Assessment, were completed prior to the Neuse River being

designated as critical habitat for Atlantic sturgeon. The selected parameters were based on sensitivities of mussels, not Atlantic sturgeon.

257. The Atlantic Sturgeon Biological Assessment did not include any study or analysis of how Complete 540 would impact dissolved oxygen or water temperatures, which are water quality features critical to Atlantic sturgeon survival.

258. The Atlantic Sturgeon Biological Assessment also did not consider seasonal fluctuations in the studied water quality parameters.

259. The Atlantic Sturgeon Biological Assessment did not consider impacts to Atlantic sturgeon or its critical habitat due to increased sedimentation and erosion caused by Complete 540, claiming that such impacts would be “difficult to predict.”

260. The Atlantic Sturgeon Biological Assessment relied on a single site visit for evaluating physical and biological features of the Neuse River. The site visit was completed on November 17, 2017 in the immediate vicinity of where the toll highway is planned to cross the Neuse River. Based on historical data, the waterflow levels on this particular day were below the 35-year mean.

261. On January 30, 2018, NCDOT requested consultation with NMFS regarding the Complete 540 project. On March 1, 2018, NMFS requested additional information from NCDOT.

262. On May 21, 2018, NMFS responded to NCDOT’s request for consultation with a letter that concluded the project “is not likely to adversely affect listed species and critical habitat under NMFS’s purview.” Consultation Letter at 7.

263. The NMFS Consultation Letter defined the project in terms of the location where the proposed Complete 540 highway would cross the Neuse River and limited its consideration of impacts to those directly resulting from the construction of that single river crossing.

264. The NMFS Consultation Letter did not consider or disclose any impacts to Atlantic Sturgeon or its critical habitat resulting from the operation of the entire twenty-seven-mile toll highway.

265. The NMFS Consultation Letter also did not consider or disclose or any indirect or cumulative impacts to Atlantic sturgeon or its critical habitat resulting from the construction and operation of the toll highway, including increased roadway runoff or increased impervious surfaces and corresponding water quality impacts.

266. On July 19, 2018, Conservation Groups mailed written notice of their ESA claims to Secretary of the Interior Ryan Zinke, Secretary of the U.S. Department of Commerce Wilbur Ross, Secretary of the U.S. Department of Transportation Elaine Chao, Acting Administrator of the FHWA Brandye Hendrickson, and Division Administrator of FHWA John F. Sullivan III. *See* 16 U.S.C. § 15401540(g)(2)(A)(i). Secretary Zinke received the letter on July 25, 2018; Secretary Ross received the letter on July 23, 2018; Secretary Chao received the letter on July 23, 2018; FHWA Acting Administrator Hendrickson received the letter on July 23, 2018; and Division Administrator Sullivan received the letter on July 25, 2018.

FIRST CLAIM FOR RELIEF

USFWS's Incidental Take Statement Violates the APA by Authorizing All Take of Endangered and Threatened Species within the Action Area without Limit

267. The Conservation Groups incorporate by reference all preceding paragraphs.

268. In issuing an incidental take statement, USFWS must conclude that “the taking of an endangered species or a threatened species incidental to the agency action will not violate”

Section 7(a)(2)'s prohibition against jeopardizing the continued existence of protected species.
16 U.S.C. § 1536(b)(4)(B).

269. In reaching its “no jeopardy” finding, the Biological Opinion concludes that the direct effects of the action would be limited to three areas where the proposed toll highway crossings would be within 0.25 miles of known occupied habitat of dwarf wedgemussels, and that impacts to yellow lance in Swift Creek “are very similar to those of” dwarf wedgemussels. Bi-Op at 21, 25. The Biological Opinion concludes that “direct construction related effects to [yellow lance] in Middle Creek are unlikely.” *Id.* at 25.

270. The Biological Opinion also concludes that the toll highway would lead to only “a relatively small incremental increase in . . . development” and consequent impacts from impervious surfaces, water quality, and sedimentation to dwarf wedgemussels and yellow lance would be limited. Bi-Op at 21, 26.

271. Despite the Biological Opinion’s claims that the project’s direct impacts would be limited to areas of stream crossings, not including Middle Creek for yellow lance, and only have limited indirect impacts, the Incidental Take Statement authorizes take of

- a. *all* dwarf wedgemussels harassed or harmed within 53 miles of potentially occupied stream habitat, including 21 miles of Swift Creek, approximately 26 miles of Middle Creek, approximately 1 mile of White Oak Creek, and approximately 5 miles of Little Creek, Bi-Op at 28, and
- b. *all* yellow lance harassed or harmed within approximately 47 miles of potentially occupied stream habitat, including 21 miles of Swift Creek and approximately 26 miles of Middle Creek, Bi-Op at 29.

272. The Incidental Take Statement also states that USFWS’s “anticipate potential take in the form of harm would likely be limited to the area at and immediately downstream of the NC 540 crossing of Swift Creek,” but does not limit permissible take in the form of harm to this area.

273. By authorizing “incidental” take equivalent to all of the potential or known habitat of endangered dwarf wedgemussel and threatened yellow lance in the Swift Creek Watershed, the Incidental Take Statement would effectively allow the Transportation Agencies to take *all* mussels within Swift Creek watershed, in contrast to the Biological Opinion’s findings regarding its no-jeopardy conclusion.

274. The Incidental Take Statement’s authorization of take beyond what is incidental to the project, to include all potential habitat of dwarf wedgemussels and yellow lance within the action area, is arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with the law, in violation of the APA, 5 U.S.C. § 706(2); *see* 16 U.S.C. § 1536(a)(2).

SECOND CLAIM FOR RELIEF

USFWS’s No Jeopardy Finding Violates the APA by Relying on Vague, Unexplained Conservation Measures that Fail to Ensure the Project is Not Likely to Jeopardize Endangered and Threatened Mussels

275. The Conservation Groups incorporate by reference all preceding paragraphs.

276. In reaching its biological opinion that the Complete 540 project is not likely to jeopardize the continued existence of endangered and threatened species, USFWS considered conservation measures proposed by NCDOT and FHWA to “partially offset potential adverse effects to Dwarf Wedgemussel . . . and Yellow Lance.” Bi-Op at 3, including the conservation measures of a “Preconstruction Survey and Potential Mussel Relocation” and “Propagation Facility.” *Id.* at 5.

277. USFWS does not explain how a preconstruction survey can successfully minimize take of endangered and threatened mussels, particularly if, as stated in the Incidental Take Statement, “there is no practical way to know the number of [dwarf wedgemussels or yellow lance] in the Action Area,” and take for these species is “difficult to determine.” *Id.* 28-29. USFWS further fails to explain how relocating any found mussels to an undefined “appropriate habitat within Swift Creek outside of the salvage area,” will reduce take, particularly if such habitat is indirectly impaired by the project.

278. USFWS also does not explain how the proposed propagation facility can successfully reduce or offset take of endangered and threatened mussels, particularly when the facility is only funded for five years, depends on actions of third-parties other than the action agencies, and there is no commitment about the facility actually producing mussels viable for release into the project area.

279. Moreover, USFWS does not explain how such a propagation facility could operate given the demonstrated difficulty of obtaining broodstock, and USFWS’s claim that “there is no practical way to know the number of [dwarf wedgemussels or yellow lance] in the Action Area,” and take for these species is “difficult to determine,” such that locating broodstock may be impossible. *Bi-Op* at 28-29.

280. Finally, even if the facility were to successfully propagate mussels in captivity, USFWS fails to demonstrate that such captively-propagated mussels could be successfully released into the project area after construction of the Complete 540 toll highway or explain where they will be released and what habitat will be available to them to allow them to thrive.

281. The agency’s determination that the Complete 540 project is not likely to jeopardize the continued existence of such species, based on conservation measures of (1) a

preconstruction survey and potential mussel relocation, and (2) a mussel propagation facility, that are not reasonably specific, not certain to occur, and are ineffective, is arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with the law, in violation of the APA, 5 U.S.C. § 706(2); *see* 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.10-16.

THIRD CLAIM FOR RELIEF

USFWS's Incidental Take Statement Violates the APA by Failing to Set a Numerical Limit on Take of Protected Species as Required Under the ESA

282. The Conservation Groups incorporate by reference all preceding paragraphs.

283. If USFWS determines an action will not jeopardize the continued existence of endangered or threatened species, it must provide an incidental take statement specifying the impact of incidental take on affected species. 16 U.S.C. § 1536(b)(4)(i).

284. An incidental take statement must specify the amount of take anticipated from the project. USFWS must do so as a numerical limit on the take of protected species, or establish that such a numerical limit is impractical. 50 C.F.R. § 402.14(i); *see Miccosukee Tribe of Indians of Fla.*, 566 F.3d at 1275; *Oregon Nat. Res. Council*, 476 F.3d at 1037; *Arizona Cattle Growers' Ass'n*, 273 F.3d at 1249.

285. USFWS's Incidental Take Statement claims without explanation that detecting harm or lethal take of dwarf wedgemussel and yellow lance would be "difficult to determine" and is "likely not detectable or measureable." The Incidental Take Statement fails to demonstrate that specifying the extent of take in terms of number of individual protected species is impractical.

286. Rather than specifying the number of individual protected species anticipated to be taken incidental to the project, USFWS uses a surrogate measure of take. The Incidental Take Statement defines the extent of take caused by the project as all miles of potentially occupied

habitat in the project area. The Incidental Take Statement does not explain the “causal link” between this surrogate measure of potentially occupied habitat and take of the protected mussel species.

287. USFWS’s failure to set a numerical limit on take of protected species, or to establish that such a numerical limit is impractical and how the surrogate measure is causally linked to the take of listed species in its Incidental Take Statement is arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with the law, in violation of the APA, 5 U.S.C. § 706(2); *see* 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.10-16.

FOURTH CLAIM FOR RELIEF

USFWS’s Incidental Take Statement Violates the APA because it Fails to Require that the Authorized Take Must Be Monitored, in Violation of the ESA

288. The Conservation Groups incorporate by reference all preceding paragraphs.

289. An incidental take statement must include reporting requirements that must be complied with in order to implement reasonable and prudent measures necessary to minimize the impact of incidental take on affected species. 16 U.S.C. § 1536(b)(4)(iv).

290. The Complete 540 Incidental Take Statement does not include any monitoring or reporting requirements.

291. Without any monitoring or reporting requirements, there is no meaningful mechanism by which to know when the level of authorized incidental take has been exceeded. In turn, there is no way to know whether the project is in compliance with the consultation and jeopardy requirements of Section 7(a)(2).

292. USFWS’s failure to include reporting and monitoring requirements is arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with the law, in violation of the APA, 5 U.S.C. § 706(2); *see* 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.10-16.

FIFTH CLAIM FOR RELIEF

USFWS's Incidental Take Statement Fails to Establish a "Trigger" for Reinitiation of Consultation with USFWS as Required Under the ESA

293. The Conservation Groups incorporate by reference all preceding paragraphs.

294. An incidental take statement must require the action agency to reinitiate formal consultation with USFWS if "the amount or extent of taking specified in the incidental take statement is exceeded." 50 C.F.R. § 402.16(a).

295. As described above, the Complete 540 Incidental Take Statement fails to specify the impact of the toll highway on the two mussel species or set a numerical limit on take, and fails to require reporting and monitoring of take, both of which are required to determine whether a take limit has been exceeded.

296. The Incidental Take Statement therefore does not establish any measurable "trigger" for reinitiation of consultation.

297. USFWS's failure to include any meaningful and effective trigger for reinitiation of consultation in the Incidental Take Statement is arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with the law, in violation of the APA, 5 U.S.C. § 706(2); *see* 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.10-16.

SIXTH CLAIM FOR RELIEF

USFWS's Incidental Take Statement Violates the APA by Relying on Improper Terms and Conditions

298. The Conservation Groups incorporate by reference all preceding paragraphs.

299. An incidental take statement must include "terms and conditions" with which the action agency must comply. 16 U.S.C. § 1536(b)(4)(iv).

300. Only those measures that will be taken by the action agency to minimize a project's incidental takings are properly included in an incidental take statement's terms and conditions. 50 C.F.R. § 402.14(i)(1)(ii); *Ctr. for Biological Diversity v. U.S. Bureau of Land Mgmt.*, 698 F.3d 1101, 1114 n.9 (9th Cir. 2012).

301. Mitigation measures that do not minimize incidental takings but nonetheless promote recovery of a species are properly considered conservation actions that are interrelated to a proposed project. *Ctr. for Biological Diversity*, 698 F.3d at 1114 n.9.

302. Conservation measures are not legally binding, 50 C.F.R. § 402.14(j), but are part of the proposed action, and their implementation is required under the terms of the consultation, meaning that failure to implement them requires new consultation, *Ctr. for Biological Diversity*, 698 F.3d at 1114.

303. The terms and conditions included in the Complete 540 Incidental Take Statement depend on actions of non-federal parties—namely NCDOT, Wake County, N.C. State, and the NCWRC—in relation to the proposed propagation facility.

304. The propagation facility does not minimize take.

305. USFWS's failure to include terms and conditions that apply to the action agency and that minimize rather than merely mitigate incidental takings in the Incidental Take Statement is arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with the law, in violation of the APA, 5 U.S.C. § 706(2); *see* 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.10-16.

SEVENTH CLAIM FOR RELIEF

USFWS's No Jeopardy Finding Violates the APA because It Is Not Supported by the Best Available Scientific Data as Required under the ESA

306. The Conservation Groups incorporate by reference all preceding paragraphs.

307. In issuing a biological opinion, USFWS must consider the best available scientific data. 16 U.S.C. § 1536(a)(2).

308. USFWS's Biological Opinion for the Complete 540 project failed to use the best available scientific data to properly document and analyze the likely impacts from the proposed toll highway to endangered and threatened mussel species, including failing to account for indirect effects from induced growth, harmful water quality effects, and impacts to necessary support species, among other shortcomings.

309. USFWS's failure to fully consider all likely impacts to threatened and endangered species, and in turn its determination that the Complete 540 project is not likely to jeopardize the continued existence of such species, is arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with the law, in violation of the APA, 5 U.S.C. § 706(2); *see* 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.10-16.

EIGHTH CLAIM FOR RELIEF

USFWS's Biological Opinion Violates the APA by Failing to Document an Accurate Environmental Baseline

310. The Conservation Groups incorporate by reference all preceding paragraphs.

311. A biological opinion must consider all effects of the proposed action, which include "direct and indirect effects . . . on the species . . . , together with the effects of other activities that are interrelated or interdependent with [the] action, that will be added to the environmental baseline." 50 C.F.R. § 402.02.

312. In turn, the environmental baseline is defined to include "the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already

undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process.” *Id.*

313. The Complete 540 Biological Opinion’s environmental baseline fails to include impacts from the currently planned Atlantic Coast Pipeline which would also cross and directly and indirectly impact the Swift Creek watershed.

314. Moreover, the USFWS’s analysis of indirect and cumulative impacts relies entirely on an Indirect and Cumulative Effects Report conducted by Michael Baker Engineering on behalf of NCDOT, which relied on a flawed methodology for projecting land use changes caused by the project, and ignored the contrary evidence about the likelihood that the highway will induce significant land use changes.

315. The environmental baseline for the Biological Opinion is arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with the law, in violation of the APA, 5 U.S.C. § 706(2); *see* 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.10-16.

NINTH CLAIM FOR RELIEF

USFWS’s Biological Opinion Violates the APA by Failing to Consider How the Toll Highway Will Impact Recovery of Threatened and Endangered Species

316. The Conservation Groups incorporate by reference all preceding paragraphs.

317. The intended goals of the ESA include preventing the extinction of a species and allowing a species to recover to the point where it can be de-listed. *Gifford Pinchot Task Force v. U.S. Fish & Wildlife Serv.*, 378 F.3d 1059, 1070 (9th Cir. 2004).

318. Recovery is an essential component of the ESA that must be considered when an agency makes a jeopardy analysis. 50 C.F.R. § 402.02 (defining “jeopardize” as “reduce

appreciably the likelihood of both the survival *and recovery* of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.” (emphasis added)).

319. In the Biological Opinion USFWS made no attempt to address how construction of Complete 540 or associated actions would impact recovery of the two mussel species.

320. The Biological Opinion’s failure to consider species recovery for the two mussel species is arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with the law, in violation of the APA, 5 U.S.C. § 706(2); *see* 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.10-16.

TENTH CLAIM FOR RELIEF

NMFS’ Conclusion that Complete 540 Is Not Likely to Adversely Affect Atlantic Sturgeon or its Critical Habitat Violates the APA Because It Is Not Supported by the Best Available Scientific Data as Required under the ESA

321. The Conservation Groups incorporate by reference all preceding paragraphs.

322. Throughout the consultation process, federal agencies must use the best available scientific data in evaluating the effects of the proposed action. 16 U.S.C. § 1536(a)(2).

323. The agencies must consider all effects of the proposed action during consultation, which include “direct and indirect effects . . . on the species . . . , together with the effects of other activities that are interrelated or interdependent with [the] action, that will be added to the environmental baseline.” 50 C.F.R. § 402.02; *see also* 402.12(a) (explaining that a biological assessment “shall evaluate the potential effects of the action”).

324. The action area for purposes of evaluating the effects of the action “means all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.” 50 C.F.R. § 402.02.

325. The Transportation Agencies' Atlantic Sturgeon Biological Assessment for the Complete 540 project failed to use the best available scientific data to properly document and analyze the likely impacts from the proposed toll highway to endangered Atlantic sturgeon, including failing to account for indirect effects from induced growth, failing to study harmful water quality effects such as those to dissolved oxygen and temperature levels, and failing to adequately study impacts downstream from the Neuse River crossing, among other shortcomings.

326. NMFS's Consultation letter failed to consider any indirect or cumulative impacts to Atlantic sturgeon and its critical habitat, failed to consider impacts from the operations of the Complete 540 toll highway facility, and limited its impacts analysis to direct impacts from construction of the Neuse River crossing within the direct vicinity of the crossing.

327. NMFS's failure to fully consider all likely effects of the action within the action area, and in turn its determination that the Complete 540 project is not likely to adversely affect Atlantic sturgeon or its critical habitat, is arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with the law, in violation of the APA, 5 U.S.C. § 706(2); *see* 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.10-16.

ELEVENTH CLAIM FOR RELIEF

NMFS's Conclusion that Complete 540 Is Not Likely to Adversely Affect Atlantic Sturgeon or its Critical Habitat Violates the APA by Failing to Document an Accurate Environmental Baseline

328. The Conservation Groups incorporate by reference all preceding paragraphs.

329. During ESA consultation, federal agencies must use an environmental baseline in evaluating impacts. The environmental baseline is defined to include "the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the

anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process.” 50 C.F.R. § 402.02.

330. The Atlantic Sturgeon Biological Assessment environmental baseline fails to include impacts from the currently planned Atlantic Coast Pipeline which would also cross and directly and indirectly impact the Neuse River.

331. Moreover, the Atlantic Sturgeon Biological Assessment’s analysis of indirect and cumulative impacts relies entirely on an Indirect and Cumulative Effects Report conducted by Michael Baker Engineering on behalf of NCDOT, which relied on a flawed methodology for projecting land use changes caused by the project, and ignored the contrary evidence about the likelihood that the highway will induce significant land use changes.

332. The environmental baseline for the Atlantic Sturgeon biological assessment and NMFS’s consequent consultation conclusion that the Complete 540 project is not likely to adversely affect Atlantic sturgeon or its critical habitat is arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with the law, in violation of the APA, 5 U.S.C. § 706(2); *see* 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.10-16.

TWELTH CLAIM FOR RELIEF

The Transportation Agencies’ Analysis of the Impact of Complete 540 on Environmental Justice Communities was Arbitrary and Capricious

333. The Conservation Groups incorporate by reference all preceding paragraphs.

334. NEPA requires that every EIS must fully and fairly discuss the adverse environmental effects of a proposed action, including “effects on natural resources and on the components, structures, and functioning of affected ecosystems,” as well as “aesthetic, historic, cultural, economic, social or health [effects].” 40 CFR § 1508.8(b).

335. Pursuant to Executive Order 12898, all “Federal agencies, to the greatest extent practicable” are required to “make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.”

336. In keeping with this Executive Order, the U.S. Department of Transportation has adopted a policy “to promote the principles of environmental justice (as embodied in the Executive Order) through the incorporation of those principles in all DOT programs, policies, and activities. This will be done by fully considering environmental justice principles throughout planning and decision-making processes in the development of programs, policies, and activities, using the principles of the National Environmental Policy Act of 1969 (NEPA), Title VI of the Civil Rights Act of 1964.”

337. An environmental justice analysis’s purpose is to “determine whether a project will have a disproportionately adverse effect on minority and low income populations.” *Standing Rock Sioux Tribe v. U.S. Army Corps of Engineers*, 255 F. Supp. 3d 101, 140 (D.D.C. 2017) (quoting *Allen v. Nat’l Institutes of Health*, 974 F. Supp. 2d 18, 47 (D. Mass. 2013)).

338. The Transportation Agencies failed to acknowledge and analyze the disproportionate effect that Complete 540 would impose on low-income and minority communities.

339. The Conservation Groups raised concerns that low-income communities would suffer all the negative impact of the toll highway, but would be unable to afford to pay a costly toll to use it. In response, the Transportation Agencies stated merely that all citizens would gain a benefit from the toll highway because it would improve congestion on existing highways. The

Transportation Agencies' analysis shows, however, that congestion will not be improved on all roadways by Complete 540, and that other alternatives would have improved congestion more.

340. The Transportation Agencies' failure to review impacts to environmental justice communities based on incorrect assumptions, and their failure to respond to comments on this issue, violates NEPA and its implementing regulation and is arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with the law, in violation of the APA, 5 U.S.C. § 706(2); 42 U.S.C. § 4332.

THIRTEENTH CLAIM FOR RELIEF

The Transportation Agencies' Failure to Analyze Climate Changing Greenhouse Gases was Arbitrary and Capricious

341. The Conservation Groups incorporate by reference all preceding paragraphs.

342. NEPA requires that every EIS must fully and fairly discuss the adverse environmental impacts of the proposed action, including a proposed project's indirect impacts. 42 U.S.C. § 4332(2)(C), (E).

343. The NEPA regulations define "indirect" impacts as impacts "which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." 40 C.F.R. § 1508.8(b). Further, indirect impacts may include "growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems." 40 C.F.R. § 1508.8(b).

344. NEPA also requires agencies to consider and respond to all comments submitted in a Draft EIS. 40 C.F.R. § 1503.4. While the agency need not respond individually to every comment, it must "reasonably respond to those comments that raise significant problems." *State of N.C. v. FAA*, 957 F.2d 1125, 1135 (4th Cir. 1992).

345. The NEPA documents for Complete 540 failed to include any analysis of how climate changing greenhouse gases would increase if the project is constructed and failed to explain why such an analysis was not possible to perform.

346. The NEPA documents for Complete 540 failed to include a response to comments by the Conservation Groups and others asking for an analysis of greenhouse gases.

347. The NEPA documents are arbitrary and capricious and inadequate under NEPA because they fail to analyze the impact Complete 540 will have on greenhouse gas emissions and associated climate change or to explain why such an analysis is not possible.

348. The Transportation Agencies' failure to consider greenhouse gases and failure to respond to comments violates NEPA and its implementing regulation and is arbitrary, capricious, and otherwise not in accordance with law, in violation of the APA. 5 U.S.C. § 706(2); 42 U.S.C. § 4332.

FOURTEENTH CLAIM FOR RELIEF

The Transportation Agencies' Failure to Analyze Impacts to Wildlife and Habitat and to Present the Impacts of Different Alternatives in a Comparative Format Was Arbitrary and Capricious

349. The Conservation Groups incorporate by reference all preceding paragraphs.

350. NEPA requires that every EIS must fully and fairly discuss the adverse environmental effects of a proposed action, including "effects on natural resources and on the components, structures, and functioning of affected ecosystems," as well as "aesthetic, historic, cultural, economic, social or health [effects]." 40 CFR § 1508.8(b).

351. The Transportation Agencies failed to study and disclose impacts to species protected under the ESA, and improperly relied on inadequate ESA documents to present these

analyses, even though some of the relied-upon ESA documents were not produced until after the FEIS was published.

352. The Transportation Agencies failed to disclose and analyze the impact of different alternatives, including a “No Build” alternative, to ESA listed species in a comparative format.

353. The Transportation Agencies failed to study and disclose impacts to species that are not listed under the ESA.

354. The Transportation Agencies failed to disclose the impact of different alternatives, including a “No Build” alternative, to non-ESA listed species in a comparative format.

355. The Transportation Agencies failed to study and disclose impacts to the overall ecosystem function due to habitat loss and fragmentation.

356. The Transportation Agencies’ failure to study the impact of different alternatives, including a “No Build” alternative, on ESA-listed and ESA non-listed species, and failure to study impacts to ecosystem function violates NEPA and its implementing regulation and is arbitrary, capricious, and otherwise not in accordance with law in violation of the APA, 5 U.S.C. § 706(2); 42 U.S.C. § 4332.

FIFTHTEENTH CLAIM FOR RELIEF

The Transportation Agencies’ Failure to Analyze Mobile Source Air Toxics Was Arbitrary and Capricious

357. The Conservation Groups incorporate by reference all preceding paragraphs.

358. NEPA requires that every EIS must fully and fairly discuss the adverse environmental effects of a proposed action, including “effects on natural resources and on the components, structures, and functioning of affected ecosystems,” as well as “aesthetic, historic, cultural, economic, social or health [effects].” 40 CFR § 1508.8(b).

359. NEPA requires that every EIS must fully and fairly discuss the adverse environmental impacts of the proposed action, including a proposed project's indirect impacts. 42 U.S.C. § 4332(2)(C), (E).

360. The NEPA regulations define "indirect" impacts as impacts "which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." 40 C.F.R. § 1508.8(b). Further, indirect impacts may include "growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems." 40 C.F.R. § 1508.8(b).

361. The Transportation Agencies failed to study and disclose increases to MSATs.

362. The Transportation Agencies' refusal to study these impacts was based, in part, on the expectation that fuel economy standards will continue to improve over time, due to federal regulations. These federal regulations, however, are undergoing repeal by the Environmental Protection Agency. *See* 83 Fed. Reg. 42,986.

363. The Transportation Agencies failed to consider the localized impacts of increased MSATs.

364. The Transportation Agencies failed to consider the health impact of MSAT increases.

365. The Transportation Agencies' failure to study MSATs violates NEPA and its implementing regulations and is arbitrary, capricious, and otherwise not in accordance with law, in violation of the APA, 5 U.S.C. § 706(2); 42 U.S.C. § 4332.

SIXTEENTH CLAIM FOR RELIEF

The Transportation Agencies' Failure to Analyze Impacts to Wetlands, Streams and Ecological Function Was Arbitrary and Capricious

366. The Conservation Groups incorporate by reference all preceding paragraphs.
367. NEPA requires that every EIS must fully and fairly discuss the adverse environmental effects of a proposed action, including “effects on natural resources and on the components, structures, and functioning of affected ecosystems,” as well as “aesthetic, historic, cultural, economic, social or health [effects].” 40 CFR § 1508.8(b).
368. NEPA requires that every EIS must fully and fairly discuss the adverse environmental impacts of the proposed action, including a proposed project’s indirect impacts. 42 U.S.C. § 4332(2)(C), (E).
369. The NEPA regulations define “indirect” impacts as impacts “which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.” 40 C.F.R. § 1508.8(b). Further, indirect impacts may include “growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.” 40 C.F.R. § 1508.8(b).
370. The Transportation Agencies failed to provide any detail about the ecological functions of streams and wetlands that will be destroyed, and failed to analyze what the cumulative ecological impact of the project will be.
371. The Transportation Agencies failed to analyze the impacts to streams, wetlands, and ecological function in comparison to the impacts to those resources under a “No Build” alternative.

372. The Transportation Agencies improperly relied on a baseline assumption that buffers would be in place to protect water quality, despite the fact that several of the buffers relied upon are no longer legally required.

373. The Transportation Agencies' analysis of streams, wetlands, and ecological function violates NEPA and its implementing regulations and is arbitrary, capricious, and otherwise not in accordance with law in violation of the APA, 5 U.S.C. § 706(2); 42 U.S.C. § 4332.

SEVENTEENTH CLAIM FOR RELIEF

The Transportation Agencies' Failure to Analyze and Disclose How Impacts to Streams and Wetlands will be Mitigated was Arbitrary and Capricious

374. The Conservation Groups incorporate by reference all preceding paragraphs.

375. NEPA requires that the alternatives analysis in an EIS must "include appropriate mitigation measures not already included in the proposed action or alternatives." 40 C.F.R. § 1502.14(f).

376. NEPA further requires that an EIS shall include a discussion of the "natural or depletable resource requirements and conservation potential of various alternatives and mitigation measures." 40 C.F.R. § 1502.16(f). The regulations also require that an EIS include discussion of the means to mitigate adverse environmental impacts that are not fully covered by the alternatives analysis. 40 C.F.R. § 1502.16(h).

377. The Transportation Agencies have failed to include any detail about the stream and wetland mitigation that will be employed to offset impacts to streams and wetlands.

378. The Transportation Agencies have failed to disclose where the mitigation will be located, and how it will replace the ecological and hydrological functions that will be lost through construction of the project.

379. The Transportation Agencies' failure to analyze and disclose how stream and wetland impacts will be mitigated violates NEPA and its implementing regulations and is arbitrary, capricious, and otherwise not in accordance with law, in violation of the APA, 5 U.S.C. § 706(2); 42 U.S.C. § 4332.

EIGHTEENTH CLAIM FOR RELIEF

The Transportation Agencies' Analysis of Indirect and Cumulative Impacts Was Arbitrary and Capricious

380. The Conservation Groups incorporate by reference all preceding paragraphs.

381. NEPA requires that every EIS must fully and fairly discuss the adverse environmental impacts of the proposed action, including a proposed project's indirect impacts. 42 U.S.C. § 4332(2)(C), (E).

382. The NEPA regulations define "indirect" impacts as impacts "which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." 40 C.F.R. § 1508.8(b). Further, indirect impacts may include "growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems." 40 C.F.R. § 1508.8(b).

383. The FEIS fails to adequately assess and disclose the indirect impacts of Complete 540, including all the induced development and associated environmental impacts that are likely consequences of constructing the new toll highway. These failures include:

- a. The Transportation Agencies based their analysis of indirect impacts on methodology that is arbitrary and outdated.
- b. The Transportation Agencies failed to reconcile their conclusion that the \$2.2 billion toll highway will have almost no impact on levels of growth with

numerous contradictory public statements of state, regional, and local planners stating that the toll highway would result in substantial development in the project area.

- c. The Transportation Agencies failed to present their analysis of indirect effects of different project alternatives in comparative format.
384. The Transportation Agencies' analysis of indirect and cumulative impacts violates NEPA and its implementing regulations and is arbitrary, capricious, and otherwise not in accordance with law, in violation of the APA, 5 U.S.C. § 706(2); 42 U.S.C. § 4332.

NINETEENTH CLAIM FOR RELIEF

The Transportation Agencies' Analysis of Alternatives was Arbitrary and Capricious and Deficient in Scope and Analysis

385. The Conservation Groups incorporate by reference all preceding paragraphs.
386. NEPA requires that an EIS include a "detailed statement" regarding "alternatives to the proposed action." 42 U.S.C. § 4332(2)(C)(iii). In preparing this statement, an agency must rigorously explore and objectively evaluate all reasonable alternatives that could achieve the underlying project purpose. 40 C.F.R. § 1502.14(a). This alternatives analysis is "the heart of the environmental impact statement," and should "present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision-maker and the public." *Id.* § 1502.14. Only those alternatives that are deemed to be unreasonable can be eliminated from study. *Id.*
387. NEPA further requires that every EIS must be prepared with objective good faith and must fully and fairly discuss, among other things, the adverse environmental effects

of the proposed action and the alternatives to the proposed action that may avoid or minimize these adverse effects. 42 U.S.C. § 4332(2)(C) and (E).

388. The Transportation Agencies failed to evaluate a full range of reasonable alternatives to the Complete 540 toll highway. The Transportation Agencies' failures include:

- a. The selected alternative fails to meet one of the two key stated purposes for the project, rendering the review of alternatives arbitrary and capricious.
- b. All alternatives to a new-location toll highway were eliminated early in the planning process based on an arbitrary screening methodology.
- c. All alternatives to a new-location toll-highway were eliminated based on an illegal traffic forecasting methodology.
- d. Alternative ACCESS2040, which was suggested during the public comment period by a transportation expert, was arbitrarily rejected and not fully studied or disclosed.
- e. The Transportation Agencies failed to present the indirect impacts of different alternatives in a comparative fashion, violating NEPA.
- f. The Transportation Agencies illegally predetermined the NEPA process and did not present the different alternatives in an objective manner, but rather favored one alternative from the outset in a way that was misleading.

389. The Transportation Agencies' analysis of alternatives violates NEPA and its implementing regulations and is arbitrary, capricious, and otherwise not in accordance with law, in violation of the APA, 5 U.S.C. § 706(2); 42 U.S.C. § 4332.

TWENTIETH CLAIM FOR RELIEF

The Federal Highway Administration has Failed to Insure Against Jeopardy of the Endangered Dwarf Wedgemussel, in Violation of the ESA

390. The Conservation Groups incorporate by reference all preceding paragraphs.
391. Section 7 of the ESA requires FHWA “insure that any action authorized, funded, or carried out by [FHWA] . . . is not likely to jeopardize the continued existence of” a threatened species. 16 U.S.C. § 1536(a)(2).
392. Defendant FHWA’s June 6, 2018 ROD authorized the building of the Complete 540 toll highway within the meaning of an “action authorized, funded, or carried out” by the agency.
393. The ROD improperly relied on a Biological Opinion and Incidental Take Statement that are deeply flawed as outlined in the preceding paragraphs.
394. Because the USFWS Biological Opinion is arbitrary, capricious, and otherwise not in accordance with law in its analysis of impacts to listed species, FHWA cannot reasonably rely on it to insure that the Complete 540 project would not jeopardize the continued existence of endangered dwarf wedgemussel.
395. Defendant FHWA has failed to meet its substantive duty to insure that its actions are not likely to jeopardize the continued existence of endangered dwarf wedgemussel, in violation of Section 7 of the ESA, 16 U.S.C. § 1536(a)(2).

TWENTY-FIRST CLAIM FOR RELIEF

The Federal Highway Administration has Failed to Insure Against Jeopardy of Threatened Yellow Lance Mussels, in Violation of the ESA

396. The Conservation Groups incorporate by reference all preceding paragraphs.

397. Section 7 of the ESA requires FHWA “insure that any action authorized, funded, or carried out by [FHWA] . . . is not likely to jeopardize the continued existence of” a threatened species. 16 U.S.C. § 1536(a)(2).
398. Defendant FHWA’s June 6, 2018 ROD authorized the building of the Complete 540 toll highway within the meaning of an “action authorized, funded, or carried out” by the agency.
399. The ROD improperly relied on a Biological Opinion and Incidental Take Statement that are deeply flawed as outlined in the preceding paragraphs.
400. Because the USFWS Biological Opinion is arbitrary, capricious, and otherwise not in accordance with law in its analysis of impacts to listed species, FHWA cannot reasonably rely on the Biological Opinion to insure that the Complete 540 project would not jeopardize the continued existence of threatened yellow lance mussel.
401. Defendant FHWA has failed to meet its substantive duty to insure that its actions are not likely to jeopardize the continued existence of threatened yellow lance mussel, in violation of Section 7 of the ESA, 16 U.S.C. § 1536(a)(2).

TWENTY-SECOND CLAIM FOR RELIEF

The Federal Highway Administration has Failed to Insure Against Jeopardy of Endangered Atlantic Sturgeon, in Violation of the ESA

402. The Conservation Groups incorporate by reference all preceding paragraphs.
403. Section 7 of the ESA requires FHWA “insure that any action authorized, funded, or carried out by [FHWA] . . . is not likely to jeopardize the continued existence of” a threatened species. 16 U.S.C. § 1536(a)(2).

404. Defendant FHWA's June 6, 2018 ROD authorized the building of the Complete 540 toll highway within the meaning of an "action authorized, funded, or carried out" by the agency.
405. Because the NMFS Consultation Letter and FHWA's Biological Assessment are arbitrary, capricious, and otherwise not in accordance with law in their analysis of impacts to listed species, FHWA cannot reasonably rely on the Consultation Letter to insure that the Complete 540 project would not jeopardize the continued existence of Atlantic Sturgeon and would not destroy or adversely modify critical habitat of Atlantic Sturgeon.
406. Defendant FHWA has failed to meet its substantive duty to insure that its actions are not likely to jeopardize the continued existence of Atlantic Sturgeon and not likely to destroy or adversely modify critical habitat of Atlantic Sturgeon in violation of Section 7 of the ESA, 16 U.S.C. § 1536(a)(2).

TWENTY-THIRD CLAIM FOR RELIEF

The Transportation Agencies' Failure to Prepare a Supplemental Environmental Impact Statement to Analyze the Impact of the New Federal Rule Freezing CAFE Standards Was Arbitrary and Capricious

407. The Conservation Groups incorporate by reference all preceding paragraphs.
408. Federal regulations require that an agency "shall" prepare a supplement to an EIS where "significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts" arise. 40 C.F.R. § 1502.9(c)(1).
409. Significant new information has arisen, prompting new concerns that NCDOT must address before proceeding with the project. NHTSA's proposed rule freezing the

current CAFE and CO2 standards at 2020 levels through 2026, 83 Fed. Reg. 42,986, will have a dramatic impact on the emissions that the Complete 540 project will cause, including MSATs.

410. Failure to evaluate this new information in a SEIS violated NEPA and its implementing regulations, and was arbitrary, capricious, and otherwise not in accordance with law, in violation of the APA, 5 U.S.C. § 706(2); 42 U.S.C. § 4332.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs respectfully request that this Court:

- A. Issue a declaratory judgment stating that the Defendants have violated the Administrative Procedure Act, the National Environmental Policy Act, and the Endangered Species Act, in the respects set forth above;
- B. Order that the USFWS Biological Opinion and Incidental Take Statement dated April 10, 2018, the NMFS Consultation Letter dated May 21, 2018 and Atlantic Sturgeon Biological Assessment dated January 2018, and the Record of Decision dated June 6, 2018 be vacated, set aside, and/or rescinded;
- C. Grant appropriate preliminary and permanent injunctive relief to ensure that Defendants comply with NEPA and the ESA, and specifically to ensure that defendants take no further actions toward proceeding with the challenged Complete 540 toll highway until they have complied with NEPA and the ESA, including by preparing an SEIS that evaluates the highway's impacts on air quality after repeal of the 2012 Clean Car Rules;
- D. Award Plaintiffs the costs of this action, including their reasonable attorneys' fees; and

E. Grant Plaintiffs such further and additional relief as the Court deems just and proper.

This the 5th day of October, 2018.

s/ Kimberley Hunter
Kimberley Hunter
N.C. Bar No. 41333
khunter@selcnc.org
Ramona H. McGee
N.C. Bar No. 47935
rmcgee@selcnc.org
SOUTHERN ENVIRONMENTAL LAW CENTER
601 West Rosemary Street, Suite 220
Chapel Hill, North Carolina 27516-2356
Telephone: (919) 967-1450
Facsimile: (919) 929-9421
Attorneys for Plaintiffs